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Fundamentals of
INVESTMENT BANKING

Fundamentals of
INVESTMENT
BANKING

Sponsored by

INVESTMENT BANKERS ASSOCIATION OF AMERICA

New York
PRENTICE-HALL, INC.

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To

Nathan D. McClure

1897-1949

*a co-editor, whose contributions to education in
the field of investment banking were outstanding*

FOREWORD

THIS book has been prepared with the following objectives in mind: (1) To acquaint the reader with various types of securities, and their functions. (2) To provide instruction in the interpretation of financial statements. (3) To offer a study of non-statistical factors and market influences. (4) To explain a large variety of corporate financial problems including dividend policies, mergers, refinancings, and reorganizations. (5) To familiarize the reader with the practices and operations of the securities markets. (6) To acquaint the reader with the problems arising out of federal and state regulation of investment banking. (7) To develop an understanding of the considerations which influence investors in their selection of investments.

Acknowledgment is made to Dean G. Rowland Collins of the Graduate School of Business Administration of New York University and to Harry Guthman of Northwestern University, who were especially helpful to the committee in early encouragements and in giving their assistance in preparing the original outline, and to Alden H. Little, Secretary Emeritus, who encouraged the early efforts of the Education Committee and whose long and devoted service to the Association is well known to all of its members.

The authors of the various subjects in the book have made permanent contributions to investment banking, and the Association is greatly indebted to them for their efforts.

Nathan D. McClure of Harriman Ripley & Co., Incorporated, to whom this book is dedicated, John F. Fennelly of Glore, Forgan & Co., and Robert W. Clark, Jr. have edited the material which appears in this volume and their generous contribution of time and interest is also acknowledged.

With improved training methods, the investment banking industry will continue to prepare its men for positions of responsibility and service to investors, to industry, and to the nation.

JULIEN H. COLLINS

Chairman, Education Committee 1944-1947

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Fundamentals of

INVESTMENT BANKING

PART I
Introduction

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ECONOMICS OF INVESTMENT BANKING

by Dr. Jules I. Bogen, *Professor of Finance,*
Graduate School of Business Administration,
New York University

IN THIS INTRODUCTION to the study of investment banking we shall discuss the subject in somewhat broad and general terms. Later we shall devote our concentrated attention to many of the practical details that you come up against in your everyday work as investment bankers. However, it is extremely important that we have a general picture of the whole investment banking machinery in relation to our entire social, economic, and political system in order that we may understand our work clearly and maintain the proper perspective. Therefore, we shall devote ourselves immediately to a consideration of the function of investment banking in our economy. Second, we shall be concerned with the institutions that perform these functions. Finally, we shall take up the public policy questions raised in connection with investment banking; namely, regulation—control or encouragement, as the case may be.

THE ECONOMIC ROLE OF INVESTMENT BANKING

It has been possible for our modern economic system to reach its present high level of development only through the employment of enormous funds of capital by free and private enterprise; and because these huge accumulations of capital are vital to the operation and the progress of our private enterprise system, we call it a *capitalistic* system. By capital we mean the productive assets such as tools, machines, plants, and working capital in which great accumulations of savings have been invested and which would not otherwise exist.

The use of capital in large amounts has been required to produce modern standards of living. Quite obviously, without our railroads, without thousands of factories, large and small, without our great public utilities, the standard of living of which America is so justly proud could never have been achieved. Likewise, if we are to improve our standard of living, additional capital is required.

Capital also is required to achieve the high standards of productivity

of which our labor force is capable. The unaided workman, no matter how skillful, could never attain the miracles of productivity that have been reached because, on the average, several thousand dollars worth of tools and equipment supplement the effort of each employee.

Further, if we are to provide a large number of jobs in the future and cure the ill of unemployment—if we are to achieve *full employment*—additional capital must be forthcoming in large amounts to provide the equipment, the plant, the tools for these added workers. Thus, an adequate flow of new savings into investments is essential to the high level of employment that is an avowed objective of our nation in the future.

The provision of capital goods, or the process of capital formation, as economists call it, is a dual process. First, a part of current income must be saved and not spent. Second, these savings must actually be devoted to the acquisition of equipment, machinery, inventories, and other productive assets—they must be *invested*.

Let us first look at savings, the initial step in this process. During recent years statistics have been made available to us by the United States Department of Commerce that measure the savings process with a relatively high degree of accuracy for the first time. These statistics show the value of all the goods and services produced in the United States, which is called the *gross national product*. When we deduct from the gross national product the taxes paid by business enterprises, and corporate savings, that which is left is the *national income*. Of the total of individual incomes the balance, after the payment of personal taxes, becomes *disposable income*.

Disposable income may be spent or saved. In 1941, for example, the disposable income of all the people in the United States was estimated by the Department of Commerce to be about \$90,000,000,000, of which \$75,000,000,000 was spent for goods and services and \$15,000,000,000 was saved. These individual savings were supplemented by corporate savings in the form of reserves and profits that were not paid out as dividends, but were reinvested in the business.

Obviously, since capital is formed by the investment of savings, the functioning of our economic system depends upon maintaining an adequate volume of such savings; and many factors determine the amount of national savings. One of the most important factors is the distribution of national income, because people in the low income brackets generally find it necessary to consume all, or nearly all, of what they earn. It is in the middle—and higher—income brackets that savings constitute a considerable part of the disposable income. Bearing this in mind, it is then clear that personal income taxation will have a marked effect upon the volume of savings, since high rates of taxation upon the

higher income brackets correspondingly reduce the amount that people in these brackets can save and invest.

Finally, habit plays an important part in the volume of savings, some people being far more aware of the desirability of putting aside funds for the future than others.

During the war, of course, the fact that so many goods for which income could be spent were not available automatically increased the volume of savings, and to this extent the wartime expansion of savings could be said to be forced. The net savings of individuals in the United States were reported by the Department of Commerce to be \$6,000,000,000 in 1939, but had risen to \$36,000,000,000 in 1944. Had homes, automobiles, and other goods been available, it is doubtful whether any such huge volume of savings could have been achieved.

The second step in the process of capital formation is the investment of savings in capital goods. The rate at which savings will be invested depends upon the willingness of people to invest the cash they save in business and in the securities of businesses, and upon the willingness of business managements to absorb additional funds.

Thus, many influences determine the rate at which current savings are invested—government policy, relations with labor, taxation, general political and economic conditions here and abroad, all play a part. In this connection, the matter of confidence is of great importance. Businessmen are willing to absorb savings freely in the expansion of their enterprises when they are confident of the future. They hesitate to borrow money or to seek additional capital by the sale of stock when the outlook is dark.

In order to obtain a clearer idea of when and why businessmen seek additional capital, let us put ourselves in the position of a typical corporate management and see what induces these people to seek additional capital for expansion. If labor relations are stable, if corporate taxes are not too high, if international conditions are reasonably peaceful, and if the government does not resort to business-baiting and to dubious economic experiments which threaten the future of the private enterprise system, the average management will think in terms of fostering new products, or of expanding production, or of taking steps to reduce the cost of producing and distributing existing products through new investments in materials, equipment, selling outlets, and the like. Having decided upon a program of development or expansion, the business management will turn to the problems of financing such program.

There are two great sources of capital. One source is internal, consisting of depreciation and other reserves, reinvested earnings, and cash accumulated out of past earnings—the savings of business. The other

source is external, consisting of bank loans, bond issues, and stock issues, by means of which funds are provided from many outside sources.

Business enterprises are in a position, then, to obtain the capital that they need, in part from internal sources and in part from external sources. While we must emphasize the importance of business savings, without which no business can live or grow, we must also emphasize the fact that such savings by no means provide an adequate supply of capital. In fact, there are many instances in which capital from internal sources is not available. This is particularly true in the case of new and smaller enterprises, especially in newer industries where profits are small and where a substantial investment of new funds is required before the enterprise can provide the products and services that consumers expect of it. However, it is likewise true even in the case of older well-established businesses.

We have heard a great deal in recent years about the danger of over-savings and the fact that our economy cannot absorb the additional capital that is currently being saved by individuals and corporations. These theories emanate from the view that our economy has become mature and that, whereas in the nineteenth century huge amounts of capital were required to build railroads and to erect public-utility and industrial plants, this is no longer true to anything like the same extent today.

It is far easier at this time than it would have been in the 1930's to convince people of the *fallacy* of this view. During World War II the United States performed miracles of production. This would have been impossible had it not been for the investment of twenty billion dollars in new facilities, provided, it is true, to a large extent by the government. However, this experience has given the people of our country the realization that our economy is still dynamic and growing, and the large majority of thinking individuals feel that it is capable of absorbing very large amounts of capital in the future.

The Twentieth Century Fund, an economic research foundation, estimates that in the fifteen years, 1946 to 1960, inclusive, the United States will need \$280,000,000,000 of additional capital invested in productive facilities in order to attain the higher levels of production and employment that modern technology and modern methods of management make possible. This would involve an annual outlay of \$18,000,000,000 a year, of which \$7,000,000,000 would be required for urban development, \$6,000,000,000 for commercial and industrial development, \$3,500,000,000 for transportation development, and almost \$2,000,000,000 for rural development in each year. This organization estimates that new capital of \$3,500,000,000 will be required each year solely for industrial facilities between now and 1960.

This huge sum will be derived to some extent from internal sources, such as depreciation reserves and reinvested earnings, as we have seen; but there are many enterprises, particularly new business and moderate sized businesses, that will depend entirely upon external sources to raise this needed capital.

Undoubtedly it will be advisable that a substantial part of this capital take the form of equity capital. It would be unfortunate indeed if this capital had to be obtained through loans alone, as past experience proves that *excessive borrowing* imposes too heavy a burden of fixed interest charges and maturities upon any business and so endangers its future existence. The interest payment on a loan is a fixed charge that must be paid each year, whether earned or not; the principal of a loan must be paid as it falls due; otherwise, a default occurs that precipitates bankruptcy. Hence, a large portion of the required financing will have to come from stock issues if the money is to be raised in a fashion that will not undermine the financial health and stability of business enterprise. The acquisition of capital through the sale of preferred and common stock issues is sound because, while dividends would be paid normally, they could be deferred for a shorter or longer period if the earnings of the enterprise, for whatever reason, should decline sharply at some time in the future.

Excessive dependency upon borrowing from banks or others has the result that the more that is borrowed, the weaker becomes the credit of the corporation and the less its ability to raise additional capital that may be required, either through loans or through stock issues. On the other hand, through balanced financing by the sale of stock along with bonds, this danger is minimized and generally avoided entirely.

In any event it is clear that our economy will require considerable amounts of capital from external sources. It is also clear that the investment banking system is the most important and practically the only external source capable of providing these funds. It is the investment banker who channels savings into investments in the securities issued by business. Thus we may say that *the primary and basic function* of the investment banker is the *formation of capital*.

The distribution of securities among investors is a highly specialized function, and experience shows that few enterprises of medium or large size can successfully dispose of their securities through their own efforts. Therefore the investment banker, with a specialized organization trained to reach investors, large and small, throughout his community, and with relations with other investment bankers to assure nation-wide distribution, is called upon to perform this function efficiently and economically. The procedure he employs we shall examine shortly.

It will be necessary not only for business concerns, but also for state and local governments, to raise large amounts of money in order to provide the new facilities and services that will be required in the era of economic expansion that we all confidently believe lies ahead. The Twentieth Century Fund estimates that new school facilities alone may require an average of \$860,000,000 a year over the next fifteen years; that the construction of streets and sewers will take another \$600,000,000 a year; and that public water supply systems will require more than a quarter of a billion dollars annually.

Thus, billions of dollars of obligations of states, municipalities, and revenue districts will be placed through groups of investment bankers and with the financial institutions that are an essential part of the investment banking machinery, which gather the savings of many millions of individuals and invest them in security issues, new and old. Again, this is the primary function of the investment banker—capital formation.

In other words, the economic role of investment banking can be summarized as that of gathering surplus funds from many millions of persons directly and through financial institutions, and making these funds available to business enterprises and to public bodies that require these savings in large amounts in order to expand the output of goods and services, to raise living standards, and in the process of doing this to furnish employment. The investment banking mechanism may be likened to a middleman, standing between those who accumulate savings and those who require savings for new investment.

An adequate investment banking system is just as important to the health of our private enterprise economy, therefore, as an adequate transportation system, an adequate manufacturing plant, and an adequate system of distribution; each is an essential cog in the whole machinery that constitutes our national economy.

New capital is required, first, for new businesses that are being promoted and that will be promoted. *New capital is required to expand old businesses.* *New capital is required* by old businesses in order to bring out and to develop new products that they will sell to supplement their old established lines. And finally, *new capital is required by state and local governments* in large amounts to provide facilities and services. To provide this capital is the primary function of the investment banker.

ADDITIONAL FUNCTIONS OF INVESTMENT BANKING

Before taking up the institutions that perform the functions of investment banking, let us consider the additional functions which investment banking has taken on because they were profitable and because there was a demand for them to supplement the basic function of capital formation.

Capital formation remains a key function of investment banking; but it is characteristic of investment banking in the United States, as it is of investment banking in other advanced countries, such as Great Britain, Holland, and France, that it performs other supplementary functions which gradually become increasingly important. Therefore, even though one is convinced that the amount of new capital that will be required in the future may not be as great as in the past—in spite of evidence which sometimes points to the opposite conclusion—there are many functions that investment bankers will perform for our economy.

A *second great function* of investment banking, which supplements the function of capital formation, is *to effect the transfer of ownership of existing wealth*. When a country is relatively new, when large amounts of new capital are required to build railroads, to erect public utility plants, and to build other new enterprises, capital formation is doubtless the dominant function of investment banking. But, as a nation becomes older, we find that to an increasing extent the investment banking machinery is called upon to transfer the ownership of businesses and securities already outstanding. And a very large part of the investment banking machinery of the United States today is devoted to the transfer of ownership of existing wealth, not to the provision of new capital for new enterprises or the expansion of existing enterprises.

This function of the transfer of ownership takes several forms. The most evident is the transfer of ownership of existing securities. This is accomplished through the securities exchanges and through the over-the-counter markets by large organizations of brokers and dealers.

However, the transfer of ownership of existing wealth also takes other forms. For example, there are many closely held businesses which the owners wish to dispose of in whole or in part, and in many cases the size of the business makes it extremely difficult to find a buyer. Generally speaking, the large business will be disposed of by distributing its securities to the public at large; and over the last few decades, a large proportion of new security issues have been designed, not to raise new capital, but to distribute the securities of closely held businesses to the investing public.

At present, a very large part of the investment banking activity consists of this function of distributing to the general public securities of companies which have been owned by one or by a few people. Thus, the privately held companies become publicly owned companies.

This procedure is necessary for a number of reasons. We shall cite only one. Present inheritance and estate taxes make it impossible for many people who build up substantial enterprises to leave their estates in a healthy condition, because if the estate consists of the nonmarket-

able securities of a closely held business, however profitable it may be, the heirs do not have the cash required to pay the estate taxes, since they receive a nonmarketable security and yet must pay large sums to the government because of the high estate taxes prevailing. Therefore, it becomes necessary for the owners of the business or their heirs to distribute the securities publicly and, in effect, to convert nonmarketable securities into marketable securities and thus into cash. This cash may then be used to meet the estate taxes.

In recent years, we have seen nothing as spectacular as the transformation into a corporation of one of the old, leading banking houses which had been a partnership as a matter of course since its formation. The primary reason for this transformation was that as long as it was a partnership the owners faced a very serious estate tax problem. Now that it is incorporated, the individual stockholders or their heirs may sell blocks of stock out of their holdings in order to raise the cash required to meet estate taxes. The distribution of stocks of companies like this and scores of others is an investment banking function.

Situations involving the transfer of ownership from holding companies to individual investors have arisen because of the Public Utility Holding Company Act enacted by Congress in 1935. The Public Utility Holding Company Act requires that public utility holding companies may own only one group of properties operating in a single integrated geographical area. The Securities and Exchange Commission, which administers the Holding Company Act, has ruled that such an integrated group of properties must be located in one state or in immediately adjoining states, and that it is not permissible to have public utility systems which are spread over a wide area and are not closely interconnected. While this interpretation is yet to be passed upon by the United States Supreme Court, nevertheless it confronts these holding company systems that have been built up through the years with the great task of selling out or otherwise disposing of their holdings in public utility operating companies. Here then is a great job of transfer of ownership required by federal law, in line with federal economic policy; and the investment banking machinery has played an important part in performing this job, in helping to distribute the securities of those utility operating companies which the holding companies were required to sell.

For example, the Electric Light & Power Corporation, a public utility holding company, was required by the SEC to dispose of the Idaho Power Company, an operating subsidiary. The Electric Power & Light Corporation disposed of Idaho Power by selling its entire holdings of that stock to an investment banking group. The investment banking group distributed the stock throughout the nation and so effected a shift of

ownership from the holding company to individual investors all over the country. This was effected quickly and efficiently because of the existence of investment dealers with selling organizations all over the country who were specialists in this job of finding buyers for securities, of satisfying the investment requirements of the public—by offering this issue to them at an acceptable price.

Thus, this function of transferring ownership is one of the utmost importance. It involves (1) the transfer of ownership of outstanding securities; (2) the transfer of ownership of whole businesses which were closely held; and (3) the transfer of ownership from a holding company to individual investors when required by law.

Let us finally remember that the existence of an efficient brokerage machinery to transfer the ownership of existing securities plays a very important part in capital formation. This is true because a security is an intangible asset. When a person buys a bond or a stock, he is buying a certificate which is merely a printed document which is evidence of something intangible. That intangible asset he will buy only if he is confident that it has a sound basis behind it, and above all, if he is confident that he can dispose of it in case of need or if he so desires.

When we approach a client with the suggestion that he purchase a certain number of shares of stock, we are offering him a certificate that looks like any other certificate, good or bad. To give him the confidence to put his money into that certificate, it is necessary not only to build a picture in his mind of the earning power and the assets behind that security, but we must also convince him that when he wants the money, he can sell it, simply because there is an efficient machinery for taking that security off his hands at the prevailing price.

Thus if investment banking is to perform its first function of capital formation, there must also be an efficient machinery for carrying on this second function of transfer of ownership. It is only if the investor can sell, generally speaking, that he will buy.

The third function of investment banking—one which should acquire increasing importance in the future—is that function which may be described as security substitution, whereby the investment banker makes available as a substitute for outstanding securities a different security which is more acceptable to his customers or to the issuers and which they find more suitable to their needs.

The classic example of security substitution is the investment trust. The investment trust invests in existing securities and it obtains the money for such investment by selling its own securities, which may be bonds, may be preferred stocks, may be common stocks, or which may be investment certificates with special provisions of their own.

These investment trusts exist simply because there are some investors who find the investment-trust security more suitable for their investment needs than the outstanding securities which are behind these investment-trust bonds, shares, or certificates.

Holding companies are another example of security substitution in that they sell their own securities and re-invest the proceeds in other securities or properties.

Federal Land Banks do the same thing. Federal Land Banks purchase farm mortgages from farmers. They obtain the funds to do that by selling their own Federal Land Bank bonds. These bonds are investments of the highest grade, while the mortgages themselves would be regarded perhaps—certainly before the wartime period of agricultural prosperity—as not altogether desirable in many cases as investments for conservative funds. Thus, through security substitution, the Federal Land Banks create a highly marketable standardized bond to take the place of literally hundreds of thousands of individual farm mortgages of varying quality and varying terms.

In the period ahead, we will have an opportunity to see the process of security substitution attempted on a world-wide scale, in that the International Bank for Reconstruction and Development, created under the Bretton Woods agreement, is going to offer its obligations, and then use the proceeds of the sale of these obligations for making loans to governments and corporations in most of the countries of the world. This is a very ambitious program, looked at not without misgiving, as we know, by many people in this country and abroad. But this is, nevertheless, the function of security substitution. If we were offered the bond of a large company making textiles in the interior of China, naturally we would have a great deal of hesitation about putting money—especially conservative institutional money—in such an investment; but if we are offered a bond of the International Bank for Reconstruction and Development, in which the United Nations have each invested their own money to provide the basic capital, that is something else again. Already, meetings have been held by bankers, insurance companies, and others to consider the desirability of regarding these bonds as investments suitable for the most conservative financial institutions in this country.

A final type of security substitution is found in refunding, where a corporation replaces with new securities its previously outstanding securities. Investment bankers, by this refunding service, enable corporations—and governments, too—to be more flexible in their financing and to take advantage of new conditions.

In the 1920's, for example, the public utilities, including the best of them, found it necessary to sell bonds with a 6 or 6½ per cent coupon.

Subsequently interest rates declined and many of these 6 and 6½ per cent bonds were called in and paid off, because the investment bankers were able to sell new 5 per cent bonds which permitted the refunding of the 6 and 6½ per cent coupon issues. As interest rates continued to decline, it was found possible to call in the 5 per cent bonds and sell new 4 per cent bonds, thus further reducing the interest charges of these issuing corporations. In time, the 4 per cent bonds were replaced with 3½ and 3¼ per cent bonds; and recently we have seen a further decline in interest rates with the result that we are now in the stage where the 3¼ per cent bonds are being replaced with 2½ and 2¾ per cent bonds in the case of corporations with extremely good credit.

It is interesting to note in this connection that when we refund 5 and 4 per cent bonds with 2½ per cent bonds our interest charges are reduced and the effect, even if our credit was merely of average quality when we had 5 per cent bonds outstanding, is greatly to improve our credit. This is true because, by reducing our interest charges, the protection to the investor in the shape of earnings beyond interest is greatly increased. As an illustration, let us take the case of a corporation which has \$10,000,000 of bonds outstanding, with a 5 per cent coupon. Its interest charges are \$500,000 a year, and if it earns an average of \$750,000, which is available for interest, the interest is covered one and one-half times. If we replace those \$10,000,000 of 5 per cent bonds by selling, to refund them, an issue of \$10,000,000 of 3 per cent bonds, the interest is only \$300,000; and if the company earns \$750,000, it earns the interest 2½ times, and instead of having a fair investment we now have a much stronger and more conservative investment. Obviously, some adjustment would have to be made for taxes; however, the point is readily seen that refunding at lower interest rates automatically strengthens corporate credit and can turn an indifferent credit into a very strong credit. This is something that investment bankers have accomplished in numerous cases over the last few years, and is simply another example of the security substitution function which gives flexibility to our economy in an important respect.

The fourth important function of investment banking is security management.

In the early stages of the economic development of a country, the owners of capital usually manage their own capital because the people who have the capital are, as a rule, the people who manage the businesses in which this capital is invested. One hundred and fifty years ago the John Jacob Astors, the Stephen Girards, and the other early capitalists were people who ran their own fur-trading establishments, their own canals, and their own sailing-ship lines. As this country grew in size and in wealth, that condition changed. Inevitably, ownership tends to be di-

voiced from management, and the descendants of those early pioneers and of later pioneers who built up industry and wealth are to a great extent people who do not actively manage their own enterprises. And even if they are actively engaged in managing some of their enterprises, they also have interests in other enterprises which they are not equipped to manage. Thus, as a country becomes older, as its wealth becomes greater, the demand for specialized management of wealth becomes greater; and as more and more wealth is put into the marketable form of securities, there is an increased demand for security management or portfolio management service.

In every country, therefore, investment bankers necessarily become increasingly concerned with management of wealth, while still retaining the basic functions of capital formation, of transfer of ownership of securities, and of security substitution. We have arrived at a time when this task of portfolio management tends to be one of the most important functions of investment banking, and we will find that there are many organizations concerned mainly, sometimes exclusively, with the management of existing wealth.

THE INVESTMENT BANKING SYSTEM

Let us now consider the institutions which perform the functions we have outlined, and let us start with those institutions whose function it is to help provide new capital for existing enterprises and for new enterprises.

Basically, the function of capital formation is a merchandising function. Since the investment banker provides capital by buying issues of securities at wholesale and distributing them at retail, the function of capital formation may be likened to any job of distribution. Our merchandising machinery distributes commodities. The investment banking machinery distributes securities. Just as in merchandising, we have wholesalers and we have retailers; so, in investment banking, we have some organizations that specialize in setting up new issues of securities and purchasing them. We have other organizations that specialize in selling the securities to ultimate investors at retail.

The middlemen who perform this function of capital formation fall into three main groups. We have first the houses which are originators of new security issues. These originators specialize in negotiating with the corporation that is selling the new issue of securities and maintain continued contact with the corporations that need capital. In more recent times it has been necessary for these originators to bid for new securities being sold at competitive bidding, in the case of most railroads and public utilities, and therefore the close contact with the issuing cor-

poration has been weakened to some extent. However, in any case it is the originator's responsibility to arrange for the purchase or underwriting of entire issues of securities.

Second, associated with the originator in such a purchase or underwriting, we have wholesalers of securities who are in part these same originating houses and in part other houses which do not originate but which specialize in distributing the securities that they purchase or underwrite in conjunction with the originator. The use of these wholesalers is necessary because the risk in the investment banking business is very great. Profit margins are very small, and should an investment banker receive what is apparently a substantial commission due to the size of a transaction, it is important to remember that he is liable for the entire amount of the price of the issue if the deal does not go well. There is always the eventual possibility of a panic or catastrophe in which the investment banker runs the risk of a very large loss. Thus it is customary even with a small issue to bring partners into the deal to share the risk. This is sound insurance and sound economics, and these partners brought into the deal when the originator is ready to sign the purchase contract are wholesalers who share the obligation with him.

The resulting group is known as the *purchase group*, a group of wholesalers who sign an *agreement among purchasers* dividing the liability among the members; the manager, or originator, signing a purchase agreement on their behalf with the issuer. These purchase groups divide the liability through the assumption of individual participations. If it is a ten-million-dollar issue, there might be twenty members of the purchase group signing the agreement among purchasers with the originator. Each member of that purchase group will assume a fixed liability which is called his participation in the purchase group.

At this point, let us clarify the matter of the use of the term *underwriting*, which is frequently used in investment banking. In practice, the term *underwriting* is used in two different senses as far as investment banking is concerned.

1. The term *underwriting* is often used to describe a mere outright purchase. If a purchase group buys a five-million-dollar issue, and each member of that purchase group takes a specific participation, we say that the purchase group *underwrites the issue*. Actually, the purchase group merely buys the issue, agreeing to pay for it on a specified date.

2. In some transactions the underwriters do not buy the issue but merely guarantee its sale by undertaking to purchase it if someone else, say the stockholders of the corporation, do not buy it. This second type of underwriting, which is more properly called *underwriting*, is usually referred to as a *standby underwriting*.

The following is an example of a standby underwriting:

A certain company offered one new share of stock for each three shares that a stockholder held. The offering was made at \$110 a share, and the stockholders were given a certain period of time in which to exercise their right to purchase the new stock. A banking group then signed an underwriting agreement in which they undertook to buy at \$110 per share whatever shares the individual stockholders did not purchase. For this service, the underwriters were to receive a commission of \$2 per share, and since there were 800,000 shares involved it was possible for the bankers to earn a commission of approximately \$1,600,000—\$2 a share for 800,000 shares. Since the shares were selling at about \$130 when the right to purchase at \$110 was offered, it appeared that the stockholders would subscribe for all of the shares. This was a *standby underwriting agreement*.

However, by way of further illustration of the nature of the investment banking business under adverse conditions, it might be mentioned that the date of payment for this issue was October 29, 1929. And as we know, on October 29, 1929, the market was breaking violently and on that day 16,000,000 shares were sold in the greatest of all stock market panics with the result that the stockholders subscribed to very few shares, the stock opening that day at 112 and closing at 92. Therefore, at the close of the day it was necessary for the underwriting group to take practically the entire issue at a price of \$108 per share, or \$110 less \$2 underwriting commission. The issuing corporation, it must be noted, was not at all affected by the panic, and certainly from their point of view a valuable service had been rendered. From the point of view of the investment bankers who had to purchase, or take up the stock, the transaction resulted in a severe loss.

By way of comment, experience has shown that the standby underwriting agreement is by all odds the most risky type of contract that an investment banker can undertake, and it would be possible to cite a number of other examples where standby agreements proved to be very costly to the underwriters. By the same token the example illustrates how valuable a function this type of underwriting performs for the issuing corporation.

The reason behind the extremely high risk in standby underwriting is the time factor that is involved. When an investment banker buys an issue outright for distribution he is obligated in regard to that issue for a very short period of time. An underwriter may, after having negotiated the issue, sign the purchase agreement practically on the same date on which the sale is consummated, or slightly before. It is true that he must

wait until the registration statement filed with the SEC is effective, but the terms of the agreement may provide that the purchase contract shall become effective simultaneously with the effective date of the registration. With a standby agreement, on the other hand, the banker undertakes to buy whatever the stockholders do not buy, and then he must wait until the expiration of the period granted them to determine how much the stockholders have bought and what market conditions will prevail. The risk goes up, one might say, in geometrical proportion with the amount of time that elapses, since the greater the period of time involved, the greater is the possibility that unlooked for developments or unforeseen catastrophes may intervene.

In addition to the originator and the wholesalers who comprise the purchase group dividing the risk among themselves in connection with the purchase of entire issues, either directly or through a standby underwriting agreement, *we have a third class, namely, the retailers*, many of whom also engage in wholesaling. However, many retailers all over the country are concerned primarily with the retailing of securities, some specializing in retail selling, and others carrying on retail selling as a side line to the brokerage business. These are the dealers who participate by agreement in the *selling group*.

These retailers, taken together, constitute the link through which wholesalers reach investors throughout the country. They perform a specialized economic function that no corporation can perform for itself. Even a relatively small corporation, located in one community, perhaps doing business entirely in that one community, can reach investors in every part of the country overnight if the issue of securities of that corporation is handled by a wholesale group through a selling group of retailers. In fact, wholesalers are able to sign a purchase agreement and provide a million or fifty million dollars for the securities of an issuer only because they know that they have the distributing power of retailers all over the country who will sell these securities in every community, in every hamlet in the nation, for the commission that is regularly allowed to members of the selling group.

We will find that investment middlemen, originators, wholesalers and retailers, are constantly in competition with other means of raising capital. A few years ago, a number of corporations felt that the use of investment bankers to sell their issues was an unnecessary and costly luxury. They initiated the practice of by-passing the investment banking machinery and placing entire issues privately with large institutions. This practice further enabled the issuer to avoid certain difficulties attendant upon the newly enacted federal laws governing the issuing of securities.

It is interesting to note, however, that while private placements have

lost their popularity to some extent, and while certain corporations which had been resorting to private placements are returning to the practice of public offerings which enable them to appeal to the entire market rather than to depend upon one small group of buyers, the private placement technique represents a strong source of competition to the investment banker.

STOCK EXCHANGES, BROKERS, AND DEALERS

The second group of institutions which perform the functions of investment banking are the institutions concerned with the transfer of ownership of existing wealth, and especially the transfer of ownership of securities. In this connection we may note that the transfer of ownership of privately held businesses, so as to make them publicly owned companies, is done by the same investment bankers who originate and distribute new issues. It is immaterial to these investment bankers whether an existing company sells, let us say, 200,000 shares of new stock or whether the owners of a closely held company sell 200,000 shares of their own stock in order to distribute it to the public. In each case, it is the same kind of job for the banker.

However, if John Jones wants to sell 10 shares of stock, and Kate Smith, at the other end of the country, wants to buy 10 shares of the same stock, we have a typical transaction involving transfer of ownership which is similar to millions of transactions being carried on constantly. This is the function of what we may call the broker-dealer machinery.

Broadly speaking, there are two kinds of markets in outstanding securities, *auction markets* and *negotiated markets*. While there are advocates of both types of markets, we may say that actually each has its place. The typical auction market is the New York Stock Exchange, in which we have a group of members competing with one another in the purchase and sale of securities. If we offer on the floor of the New York Stock Exchange the bonds or the stock of a listed corporation, we are offering it in an auction market of world-wide proportions, because orders from all over the world are pouring into that one market place. And the aim of the exchange is to bring these buying orders and selling orders together on the basis of prices fixed by the competition between buyers and sellers.

With a negotiated market, on the other hand, the price is fixed, not by bringing buyers and sellers together and having them bid against one another, but by negotiations between one buyer and one seller. For example, when we walk into a department store we go to a counter and pick out the goods we want and complete the transaction. This is a

negotiated purchase, and while it is not usual to bargain over the price, this is merely a matter of custom. In over-the-counter trading we have a counterpart to this, and we find in this type of trading the negotiated market for securities. Thus, generally speaking, prices arising out of trading on stock exchanges are fixed by *auction*. Prices in over-the-counter trading are fixed by *negotiation*.

Furthermore, in the business of transferring the ownership of outstanding securities, there are two ways of carrying on trading. There are two types of organization—*brokers* and *dealers*, and one must understand the difference very clearly in order to understand day-to-day transactions.

A *broker* is an *agent*. A broker executes orders for a principal. In executing such orders, he carries out the instructions of his principal. When we give an order to a broker to buy, at 94, 100 shares of XYZ stock listed on the New York Stock Exchange, his sole function is to put on the floor of the Exchange a bid of 94 for XYZ stock. Our order will compete with all the other orders. If there are other bids of $94\frac{1}{2}$ or $94\frac{3}{4}$, and there is not enough XYZ stock available to satisfy these bids, we will not be able to buy the stock at 94. We will lose the auction.

On the other hand, if we order our broker to buy *at the market*, we will naturally come ahead of others who limit their orders, and we will win the auction. We may win at 95 or 96, or whatever the market calls for. If there should be heavy offerings to sell, and we have ordered our broker to buy the stock at 94, he may purchase the stock for us at 93, simply because the competition among the sellers was so great in the auction market that we are able to benefit from the competition to sell which forces the price down. The important point is that our broker is merely executing the order; he is simply our agent, acting in accordance with our instructions, for which he is paid a predetermined fee, or commission.

Naturally, if there is any delay in acting on our order, if there is any inefficiency in connection with the transaction, we might suffer. Therefore, various rules have been developed by the Stock Exchange to assure that this brokerage function is performed efficiently.

In contrast to the broker, *the dealer is a principal*, buying and selling for himself. If we wish to buy 50 shares of unlisted bank stock, we can call one of the over-the-counter houses or even the bank stock department of a Stock Exchange house and express our desire to buy 50 shares of ABC bank stock. The dealer might indicate his willingness to sell 50 shares at $50\frac{1}{4}$. We, however, might indicate that we do not want to pay more than $49\frac{3}{4}$. He might then say that he is willing to sell at $49\frac{3}{4}$ or that he will not sell for less than $50\frac{1}{4}$; or he might say that he is willing to split the difference and sell to us at 50. In the last case if we are willing to pay 50 the transaction may be completed.

This is a negotiated market. We are negotiating with a dealer, and when he sells us this stock, he is selling it out of his own inventory as a principal. If he has indicated that he is acting as principal, he may even be selling us stock which he does not yet own but which he believes he can buy elsewhere. His profit arises out of the difference between his cost for the stock and the price at which he sells to us.

It is important to make this distinction, that when we enter into a transaction with a Stock Exchange member we are as a rule giving an order to a broker, who will charge us a commission. When we enter into a transaction with an over-the-counter dealer, as a rule he will sell us his own stock as a principal and there will be no commission, because he as a dealer is depending upon a mark-up for his profit. It is, of course, possible for the Stock Exchange member to act as a dealer and for the over-the-counter dealer to act as a broker.

It may well be that we would handle such a transaction through a Stock Exchange house who in turn will deal with an over-the-counter house. In this case the Stock Exchange house is a broker in an over-the-counter transaction, and that stock exchange house will go into a negotiated market, call up an over-the-counter dealer, and buy the stock for our account. Thus we have both brokers and dealers in the over-the-counter market.

Likewise, we have both brokers and dealers in the auction market. The New York Stock Exchange, New York Curb market, and other exchanges are maintained by member brokers and dealers in order to effect transactions in securities in which they trade evenly and under safeguards. On the New York Stock Exchange we have, of course, the largest auction market in the country, and we will find on the floor of the Exchange several types of brokers and dealers.

We will indicate the most important of these, considering them in order not of number but from the point of view of the public. First, we have the commission house members who are brokers who maintain offices through which they receive public buying and selling orders. *Commission brokers* are the connecting link between the floor of the New York Stock Exchange and the investing and trading public all over the world. These commission house members maintain connections through branch offices with customers everywhere.

Second, there are *specialists*. A specialist is a broker because he executes orders for other brokers, chiefly commission brokers, in his own security. If we order 100 shares of Steel, our commission house with whom we do business often is not in a position to send its own floor member over to that trading post to execute our order. That order will simply be transferred to the Steel specialist who is handling orders in

Steel all the time and who will act as a broker. Likewise, orders with price limits out of line with the market, and which, therefore, may not be executed immediately, are customarily left with a specialist.

However, a specialist is also a dealer, who buys and sells for his own account. And, because he will buy perhaps when no one else wants to buy and he may sell when no one else wants to sell, he helps to maintain a continuous market.

Third, we have floor brokers, sometimes called *two-dollar brokers* for purely historical reasons as they used to receive a commission of \$2 per hundred shares which has since been increased. These floor brokers are *brokers' brokers*. They execute orders on the floor for other brokers.

Fourth, there are *floor dealers*, who buy and sell for their own account on the floor of the New York Stock Exchange. Also, there are odd-lot dealers whose function it is to buy and sell, for their own account, odd lots, generally less than 100 shares of any stock, thus giving the odd-lot buyer and seller instantaneous service based on the full-lot prices with a $\frac{1}{8}$ of 1 per cent differential. In addition, there are odd-lot brokers who buy and sell odd lots as agents rather than as principals. And, of course, there are bond brokers and bond dealers who comprise what is known as the *bond crowd*.

The New York Stock Exchange therefore includes several types of brokers and several types of dealers.

Clearly, it is not permissible to charge a commission as a broker in a transaction where the firm is a dealer.

The rule on this is clear-cut. A firm cannot be a broker and a dealer in the same transaction. Many firms carry on business as brokers and as dealers, but in the same transaction, a firm must either be a broker, and charge a commission for executing an order, or it must be a dealer, and its profit, if any, is in the difference between the dealer's cost price and the sale price. It is further true that the firm must make clear its intention as to which of the two it intends to be in any one transaction at the time the transaction is initiated.

SPECIAL OFFERINGS

In the last few years, a great deal has been heard about special offerings. These special offerings represent a means of strengthening the ability of the market to absorb large blocks of securities without price disturbance.

Let us say that there is some individual—perhaps he is an official or director of a corporation whose shares are listed on the New York Stock Exchange. This individual would like to dispose of a block of 50,000 shares because he wants to diversify his investments. Perhaps he wants to put his estate in more liquid shape to meet estate taxes,

or perhaps he has died and his widow would like to turn these 50,000 shares into cash either to meet estate taxes or because she feels the holding of 50,000 shares of this stock is not a suitable investment for a person in her position. It is now generally the practice to dispose of such a holding through a special offering.

There was a time in the late 1920's when we might have offered 50,000 shares as an ordinary sale on the floor of the New York Stock Exchange, and it might have been sold without moving the price even fractionally. But in more recent years, the market has become thinner, and when the market is thin, it is extremely difficult to sell any considerable block of stock without forcing the price down abnormally. While it might be possible to sell 100 shares or even 500 shares without price disturbance, continual offerings of blocks of 500 shares are entirely impractical, as such sales would eventually cause a severe break in price and generally disturb the market. For this reason in the last few years people who had large blocks of stock to dispose of began to offer them after the close of the market through selling groups, in the same manner that new issues would be offered. Subsequently, the New York Stock Exchange revised its rules against members carrying on transactions outside trading hours, and also revised its rules to permit special offerings on the floor of the Exchange during trading hours.

Under the present special offering rules, it is possible to print directly on the tape which publishes transactions on the floor of the New York Stock Exchange the fact that a special offering is being made of a listed stock at a fixed price, and that any member who hands in orders for that special offering is entitled to a dealer's commission, a retailer's commission of, let us say, three-eighths of a point or one-half of a point, which is several times greater than the ordinary Stock Exchange commission.

Thus, through these special offerings, effort is directed toward the distribution of a large block of stock. Instead of leaving the sale of that stock, therefore, to the auction market, which, if there were not enough bids, would decline sharply, the block of stock is sold by negotiation. In the course of such an offering the price may be stabilized in accordance with the rules laid down by the Securities and Exchange Commission.

Through the special offering, therefore, the auction market is made more flexible and machinery is provided for putting the same selling effort behind a block of listed stock, in order to dispose of it without market disturbance, as is put behind a new issue.

INVESTING INSTITUTIONS

We will turn now to a third group of institutions that perform investment banking functions in addition to the middlemen and in addition to

the brokers and dealers in outstanding securities. This third group is comprised of the *investing institutions*.

An investing institution may be defined briefly as an institution formed to invest other people's money.

An investing institution will perform some or all of four related functions:

1. The function of portfolio management, which is the function of selecting securities and then shifting the securities selected as circumstances indicate.

2. The function of diversification. Any one investor, unless he is a person of very large means, may not be able to buy different types of securities, securities of different industries, or the securities of several companies in each industry, so that he has a spread of risk through diversification. However, a large financial institution, investing many millions of dollars, can achieve maximum diversification.

3. The function of providing liquidity. To take an extreme case, if we put our money, however small in amount, into a savings bank, this bank may invest our money chiefly in real estate mortgages, which may become relatively frozen, even if they are of good quality. However, if we wish to withdraw our deposit, we may do so under present conditions on demand; and, generally speaking, even under the worst conditions it is necessary only to give relatively short notice of our intention to withdraw. Thus, savings banks assure the principal of our investment to be returnable and thus provide both liquidity and assurance of principal—two very valuable attributes under normal conditions.

4. The function of making the investment process convenient. In other words, the investing institution performs all kinds of services for the convenience of the investor, and if we put our money into a mutual savings bank we do not have to worry about collecting the interest or about clipping coupons for bonds, as all these things are done for us. All we find it necessary to do is to present our passbook periodically in order that the interest or dividend that has accumulated to our credit may be entered.

If we are to consider the institutions which perform these functions roughly in the order of size, we may say that first we have the *savings banks* and *savings departments*, or special interest departments, of commercial banks. These banks receive time deposits, deposits that people will not use for drawing checks to meet their day to day outlays; deposits that they regard more as investments. These savings deposits are then invested by the banks in securities and in mortgages.

The business of savings banking is carried on largely by mutual savings banks which are nonprofit organizations owned in effect by the depositors, and also by the savings departments of commercial banks, these commercial banks being owned by their stockholders. In the state of New York, and in other states in the northeast, where mutual savings banks have long operated, use of the name *savings bank* is limited to mutual institutions. Commercial banks can only maintain what are called *special interest departments*, where they receive savings deposits and allow interest thereon. The so-called *mutual savings bank states* in which the mutual savings banks are of most importance are the New England States, New York, New Jersey and Pennsylvania, in which over 90 per cent of the mutual savings banks in the United States are located. Throughout the rest of the country the commercial banks conduct the bulk of the savings bank business.

Mutual savings banks, by and large, invest their funds in government and municipal securities and in real estate mortgages. They may also buy high-grade corporate bonds; but such obligations constitute a small part of their portfolio.

The second great group of investing institutions, the institutions that invest other people's money, are the *trust companies*. Originally, trust companies and banks were mainly separate enterprises. In more recent years, the distinction between the trust company and the bank has tended to disappear simply because trust companies have opened banking departments and banks have opened trust departments.

A trust company differs from other investing institutions in several respects, of which the most important is the segregation of its trust accounts. Each individual account in a trust company is kept separate and is managed separately, while in a savings bank, we have a mingling of assets. Thus, if we deposit our funds in a savings bank, they are commingled with the deposits of thousands of other depositors, and the fund is invested as a whole. In the trust company, however, each account is handled separately, large or small, and is operated as a unit.

The exception to this is the *common trust fund*, which some trust companies maintain, in which shares are sold to individual trusts and whereby part of the funds of the trust will be invested in the common trust fund and managed as a whole. Under state and federal law, common trust funds are subject to many restrictions. Consequently, only a very small fraction of the assets managed by trust companies are common trust funds. The great bulk of the assets are kept separately.

Trust companies receive a fee for performing their function. However, trust companies differ from other investment managers in the high measure of legal liability that attaches to them. This legal liability is enforced

by means of a surcharge imposed upon the trust company for negligence in the management of trust funds, the liability being determined by state laws.

These state laws governing trust companies fall into two groups. First, there are laws like that of the state of New York, which specify the investments that a trust company or trustee may make. We have, as a result, a so-called *legal list*, and savings banks and trustees are limited to investments included in that legal list, consisting of first mortgages on real estate, government obligations, and a few groups of corporate obligations. Of course, it is possible for the owner of a trust to instruct the trustee to buy anything he wishes, but where no such instruction is given, or where the trustee is directed to buy legal securities, he is limited to the legal list.

Second, we have the *prudent man rule* which was first adopted by Massachusetts and which is growing in popularity. The *prudent man rule* provides that a trustee may buy anything which a prudent man would buy. Subsequently the courts determine whether or not the investments made by a trustee conform to the standards which would be applied by a prudent man. Of course, we know that it is possible for prudent men sometimes to make mistakes; however, the courts in a long line of decisions draw the line between an investment which will cause the trustee to be surcharged and an investment where the trustee is not surcharged, even though a loss should occur. Thus, whenever a trustee buys an investment which is not authorized by law or by his instructions, he is automatically surcharged for loss.

A third type of investing institution is the *investment trust*. Compared to the savings bank and to the trust company, the investment trust is a *relatively* unregulated type of investing institution. Since 1940, investment trusts have been subject to the Investment Company Act, a federal law, administered by the Securities and Exchange Commission. However, the Investment Company Act does not regulate the investments of registered investment companies or otherwise regulate their operation in detail. The Investment Company Act merely lays down broad rules governing the disclosure of the facts about registered investment companies, and governing some phases of their operations. Investment trusts, because they are relatively unregulated, provide more flexibility in investment service to those who want someone to invest and manage their funds.

There are several types of investment trusts, but the two great divisions are (1) the *management* investment trusts, in which the management has a great deal of flexibility in choosing and trading in securities, and (2) the *fixed* trust, which is limited to a specified list of securities with con-

sequent restrictions on the discretion of the management except as it may be exercised within the limits of that list.

While savings banks and savings departments have something like \$40,000,000,000 of deposits, and trust companies have roughly the same amount of assets in trust, investment trusts have something like a total of \$1,500,000,000 in investments. Thus, they represent a relatively much smaller body of capital, which is readily explained by the fact that they are relatively new, a development entirely of the last twenty years, with very few exceptions.

The fourth type of investing institution is the *investment counsel*. The investment counsel performs only one of the four functions of the institutions we enumerated previously. His sole function is that of management. He does not provide diversification. He does not provide liquidity or guarantee principal. While he may perform some of the services connected with management, his primary function is to supervise the portfolio and direct investment policy and actions.

The investment counsel is subject to the Investment Advisers Act of 1940, and if his operations come within the definition of the law, he must register with the SEC and submit to its supervision.

Investment counsels became of real importance only after the market break of 1929 to 1932. Investment counsel services are now provided by specialized investment counsel organizations, which confine themselves to that activity, and by departments of brokerage houses or investment houses which maintain professional personnel to provide investment counsel or investment manager service, recommending purchases and switches in portfolios. Some brokerage houses have placed this business not on the straight fee basis, which a specialized investment counsel must charge, but on a basis whereby commissions may be credited against the fee due.

In a sense, investment counsel organizations compete with trust companies, because they both give an investment management service. Trust companies, generally speaking, charge more. They also, of course, tend to give an additional service, particularly in the way of physical handling of securities, safekeeping of securities, and doing the chores that will accompany investment in a group of securities.

INSTITUTIONAL INVESTORS

It is appropriate at this point to consider a fourth group of institutions which constitutes a major part of the investment machinery of the nation. This group consists of the *institutional investors*.

Institutional investors are institutions which are formed primarily for purposes other than investment. Nevertheless, the investment of funds

plays a very important part in their operations, and they constitute a very important part of the market for investment securities. The largest of the institutional investors, and by far the most important, are the life insurance companies. The life insurance companies play a very important role in investment banking, because today they own more than \$40,000,000,000 of assets, invested chiefly in securities. Furthermore, their assets are increasing at the rate of almost \$2,000,000,000 a year. Thus, each year the life insurance companies face the problem of investing this great annual increase, and since in bad times, as well as in good, their assets increase at a rapid rate, they are a mainstay of the investment banking business.

Why are the life insurance companies, whose chief business it is to write policies against the risk of death or disability, so important in the field of investment? The reason is that the life insurance companies sell contracts which are *investment contracts* as well as *insurance contracts*.

The type of insurance that has the least investment element in it is the term-insurance policy. However, term insurance constitutes a very small part of the business of life insurance companies. Most life insurance takes the form of the straight life contract, in which a reserve must be built up during the life of the policyholder to reflect the fact that the risk of death increases from year to year.

For example, when we take out a straight life policy at the age of 25, we will pay a uniform premium as long as we live, at least until we reach the age of 95. Each year, however, after the age of 25, the risk of death will increase. Since we pay a uniform annual premium, the life insurance company must do something to protect itself against the fact that for the same annual premium they are underwriting a risk that becomes greater year by year; and this is done by building up a reserve against the policy. The result therefore when we take out a \$1000 policy at the age of 25 is that every year the actual element of insurance in that policy is really smaller and every year a reserve takes the place of part of that insurance. At the end of 20 years, perhaps, the life insurance company may only be insuring us for \$500; however that insurance is supplemented by a \$500 reserve which is actually a savings or investment account.

This, in brief and elementary terms, explains why life insurance companies accumulate such large reserves. And the accumulation is all the greater because the life insurance companies sell, in addition to straight life policies, limited payment life policies, which have a much larger reserve in relation to the amount of insurance, and endowment policies, which are actually investment contracts with a term-insurance element. Although life insurance companies are formed primarily to write insurance, then, they sell insurance contracts which have a large, and in some

cases a predominant, investment element. That investment element consists of the reserve that is accumulated against the policy.

Another group of institutional investors consists of the fire and casualty companies. Their assets, however, are in the neighborhood of about \$2,000,000,000 and, because they sell insurance pure and simple, there is no large investment element in their contracts to accelerate the expansion of their assets.

The third group of institutional investors is comprised of the eleemosynary institutions—churches, hospitals, universities and charitable foundations—which, together, have billions of dollars of invested funds.

Eleemosynary institutions in times past tended to leave the investment of their funds to one or two trustees who might be bankers. However, during the 1930's it was found that this was not an efficient way in which to handle the investment of large funds, and today we find that these institutions maintain investment management staffs of their own, or in many cases retain investment counsel, in order to secure professional management for their portfolios.

INSTITUTIONAL SELLING

The institutions that we have been discussing—investing institutions and institutional investors—together constitute a very important part of the market for securities. But selling to institutional investors and investing institutions is a specialized type of business. While this question will be discussed more fully subsequently, it might be well to mention it briefly at this time.

It must be remembered first of all that these institutions are subject to special rules and statutory restrictions. Savings banks, for example, can buy only certain securities. Those securities are indicated by the law of the state in which the savings bank operates, savings banks in New York state being limited to the so-called legal list, and savings banks in New Jersey being limited to its legal list. Similarly, trust companies, as we have already seen, may either be limited to a legal list, where they are not given discretion as to investments, or they may be subject to the *prudent man rule*.

The second point to remember in institutional selling is that *each institution has its own requirements within these legal limitations*. A savings bank, for example, receiving time deposits that usually do not change in amount much from year to year, is quite ready to buy a long term security, even one of limited marketability; whereas a commercial bank, having chiefly demand deposits that could fluctuate widely from month to month or from year to year, would have to be much more inter-

ested in the liquidity of its portfolio and would have different requirements in terms of maturity and marketability.

Under the existing regulations, a national bank or trust company can buy any bond with an investment rating. And, as a rule of thumb, the bank examiners say that any bond that is rated BAA or better, that is any bond within the four top ratings assigned by various statistical services, is a suitable bond for a bank or trust company. Nevertheless, many commercial banks buy few corporate bonds, and they concentrate upon the purchase of government obligations, because they feel that they are most suitable for their own special investment needs arising out of the investment of the demand deposits that may fluctuate widely from year to year.

THE COMMERCIAL BANKING SYSTEM

In addition to the four groups of institutions that we have taken up, the middlemen, the brokers and dealers, the investing institutions, and the institutional investors, there is a fifth group of institutions which plays an important part in investment banking and that consists of the commercial banking system of the nation.

The commercial banking system, of course, participates directly in investment banking through the receipt of savings deposits, just like a savings bank, and the investment of those deposits, chiefly in securities. But in addition, the commercial banks play an important part in investment banking because commercial banks purchase large amounts of securities in direct connection with their commercial banking business and make funds available to individuals with which to purchase securities.

One of the prime functions of the commercial banking system is to provide the nation with its money supply, with its current cash, which is done by creating demand deposits by means of notes against which businesses and individual depositors draw checks. Through the creation of demand deposits, the commercial banks provide cash which can be used by individuals for investment in securities. Likewise through the creation of demand deposits, the commercial banks have become the chief holders of government bonds.

During the war, the commercial banks increased their holdings of government securities from \$20,000,000,000 in 1941, to approximately \$85,000,000,000 in 1946, an increase of \$65,000,000,000 within five years.

When commercial banks buy government securities—and this is one of the most fundamental facts that one must keep in mind in trying to understand the operation of our financial system—they create deposits. That occurs because, on the purchase of government securities from the Treasury, the commercial bank pays for those securities by crediting the

Treasury with a deposit on its books. The government thereby obtains deposits in the commercial bank. When these deposits are spent, government deposits are transformed into business or individual deposits. The purchase of government securities by commercial banks, then, gives rise very quickly to the creation of an equivalent amount of bank deposits. Thus, during the war, by buying \$65,000,000,000 of government securities, the commercial banks created \$65,000,000,000 of deposits. Such deposits are additional funds available for the purchase of securities.

Therefore, it is correct to say that the commercial banking system is not only a big buyer of securities but that, through the creation of cash, through the creation of deposits, the commercial banks provide funds that others can use for the purpose of buying securities. And this creation of cash, which has led to a great increase in the volume of liquid funds available for investment, is playing a very important part in making possible the kind of security markets that we are experiencing today.

While we are discussing this subject it might be interesting to consider the question of what effect a reversal of this process might have. In other words, what would happen if it were possible to reduce the holdings of government securities by commercial banks?

The general effect would be to reduce our tremendously swollen bank deposits and thus to reduce their inflationary effect. Therefore, it would be desirable if possible to initiate a large-scale program of paying off bank holdings of government securities. Probably the simplest way in which to accomplish this would be to sell more long-term government bonds to insurance companies, to savings banks, to individuals, and to trust companies for their accounts, using the proceeds to pay off the government securities, to a large extent certificates of indebtedness coming due in one year, held by the commercial banks.

The question remains as to whether the Treasury, although it has been urged to follow that policy, will do so, since such a policy would result in a higher interest rate on the public debt. If the Treasury were to sell long-term bonds with perhaps a $2\frac{1}{2}$ per cent coupon and pay off certificates of indebtedness with a $\frac{7}{8}$ of 1 per cent interest rate, the total interest on the national debt, which is now over \$5,000,000,000 a year, would be further increased. However, the present policy of the Treasury seems to be to make the reduction of the interest rate on the national debt its basic objective. Therefore, it seems improbable at this time that the government will adopt this very practical antideflation policy.

PUBLIC POLICY AND INVESTMENT BANKING

We have taken up the functions of investment banking. We have taken up the institutions that perform those functions. Let us turn now

to the third phase of our discussion—public policy with relation to investment banking.

Public policy affects investment banking at several points. First, let us see how public policy affects the volume of savings, which is the first step in capital formation.

Public policy affects savings, first, through taxation. Taxation upon individuals reduces the amount they have available for investment. Experience and available statistics show that most savings occur in the higher and middle income brackets and that savings are least in the lower income brackets, since the recipients of low income find it necessary to consume the bulk of their current income, leaving little or nothing for savings. Hence, the policy of taxing middle and larger incomes very heavily tends, over a period of time, to reduce the volume of savings and, therefore, the amount of funds available for investment.

Taxation also influences the direction in which savings are invested. For example, a high capital-gains tax discourages speculative investment and also discourages so-called venture commitments, because the greater element of risk characteristic of these commitments justifies the expectation of larger-than-average returns to offset larger-than-average losses which frequently occur. However, if the larger-than-average returns are taxed away, while we still suffer the expected losses, the attraction of speculative investment is eliminated.

This truth is demonstrated by the fact that when the present 25 per cent long-term capital-gains tax was adopted, a great encouragement was given to speculative investment. Today a person of large means must pay to the government by far the largest part of his dividend income. But on the long-term capital gains, capital gains on investments held six months or longer, his maximum tax is 25 per cent, and this fact has become the dominant consideration in the investment policy of many individuals of middle and larger incomes. They cannot keep current income, for the most part, unless it takes the form of long-term capital gains. Therefore, the increased activity in the stock market reflects to no small extent this desire for long-term capital gains as against current dividend and interest income.

The volume of savings is also influenced by government policies concerning the distribution of wealth. The New Deal favored a policy of redistribution of the national income so as to bring about a more even distribution as between various groups. Such a policy tends to reduce savings, because it reduces the amount of income going to the middle and larger income groups.

Third, savings may be influenced by the government interest rate policy. Where a government fosters artificially low interest rates, which

was true of the United States during the war years, savings, over the long run, may be discouraged. Later that was not true, and savings were larger than they had ever been. But an important reason for that was that people could not buy the automobiles, the homes, and the other durable goods that they would have bought if they had been available. To a large extent, then, current savings are forced savings, forced by the inability of individuals to buy the goods they want.

In the fourth place, the volume of savings over the long run will be influenced by monetary instability. If people fear for the future purchasing power of the dollar, they will be less inclined to save and to invest their money for long periods of time.

Public policy also influences the investment of savings, the second step in the process of capital formation.

The investment of savings will be influenced, first, by taxation. Very high taxation of corporate profits will discourage the expansion of business and, so, will limit new investments.

Second, new investments in business will also be influenced by policies which limit profits, such as the policy recently announced which provides that, when a corporation raises wages, it shall be entitled to price relief only sufficient to give it the same return upon its net worth that it had before the war. While we have yet to see how far that formula will be applied, it could well have a discouraging effect upon business expansion.

In the third place, the investment of money in business may be discouraged by the current practice of double taxation of corporate earnings used to pay dividends. If money is invested in a corporation today, the income on the investment is subject to a corporate tax of 38 per cent for corporations earning \$50,000 or over. Thus, out of every dollar of earnings on the investment, only 62 cents is retained by such a corporation. If that corporation should distribute its earnings as dividends, the stockholder who receives the dividend will be subject to his personal income tax, which at the top bracket is 77 per cent. So that a top-bracket investor who puts his money into such a corporation can retain out of the available earnings, at the most, only 23 per cent of 62 per cent of the earnings, which means that he can retain slightly less than 15 per cent of what is earned on his capital. If a wealthy person, therefore, puts \$100,000 into a corporation and that corporation earns a net of 10 per cent on the investment, which is a reasonably good return, a top-bracket investor would retain out of that 10 per cent only about $1\frac{1}{2}$ per cent. Confronted with such return, tax-exempt municipal bonds with a yield of $1\frac{1}{2}$ per cent are attractive because such an investor will receive a *tax exempt* return of $1\frac{1}{2}$ per cent with a very low risk, as opposed to a $1\frac{1}{2}$ per cent return after taxes with a considerable element of risk involved.

The investment of capital is also influenced by the labor policy of the government, because that obviously will tend to determine the level of profits.

New investment will also be influenced by government competition. If the government announces that it is going into the public utility business, that will naturally discourage private investment in public utilities in the same area. Private investment could also be affected by such a measure as the Full Employment bill, as it was originally introduced in Congress, because this Full Employment bill called upon the federal government to spend sufficient money, whenever it was found necessary, to assure a job for everyone who wanted to work. That expenditure of money could well involve the entry by the government into a number of business enterprises to compete with existing private enterprise.

Public policy affects investment banking not only by influencing savings and by influencing investment, but also through the effects of government fiscal policy. That is, through the handling of the government's own finances. At present this takes the form of control over interest rates.

We have mentioned before that interest rates have been artificially low in the United States during the last few years, and we should perhaps explain a little more fully why we make that statement.

Interest rates in the United States have been going down since 1934. For the first seven years of that decline, from 1934 to 1941, it is perhaps not accurate to say that the decline was artificial, because if we investigate the reasons for that decline, we find that the chief cause was the great influx of gold from abroad.

Between 1934 and 1941, other countries sent \$16,000,000,000 of gold into the United States, all of which was bought by the Treasury at \$35 per ounce, less $\frac{1}{4}$ of 1 per cent for expenses. The Treasury, to pay for this gold, printed gold certificates so that against each dollar of gold there was an equivalent gold certificate; against each ounce of gold for which the Treasury had paid \$35 the Treasury printed \$35 of certificates. These certificates were deposited in the Federal Reserve banks, creating deposits of an equivalent amount, which as they were withdrawn to pay for the gold found their way into the commercial banks, greatly increasing their deposits and reserves.

The net result of this import of gold, therefore, was to force down the level of interest rates due to the increase in bank reserves and the necessity of having to invest these reserves. Actually, in investing these reserves, the banks found it necessary to compete for securities and loans, and in doing so, they forced down the interest rate, or, to put it another way, they forced bond prices up; and between 1934 and 1941, interest

rates in the United States declined to record lows because of the import of gold.

In 1941, the import of gold stopped, and since 1941 we have lost a moderate amount of gold. Nevertheless, since 1941 interest rates have continued to decline, at times at an accelerated pace, and this decline may be said to be entirely artificial since it results primarily from the fact that the Treasury urged the Federal Reserve banks to buy government securities so as to increase their holdings of government securities from \$2,500,000,000 in 1941 to about \$25,000,000,000 today, thus creating reserves just as they were created by the influx of gold and with exactly the same effect. In addition, as we have seen, some \$65,000,000,000 of government securities were sold to the commercial banks, whose deposits were thereby increased a like amount.

The influx of gold was something that occurred automatically. The purchase of government securities by the Federal Reserve banks and their sale to the member banks was deliberate. Therefore, it is fair to say that before 1941 the decline in interest rates was not artificial, and that since 1941, the decline in interest rates has been purely artificial.

This fiscal policy affects investment banking profoundly, because a decline in interest rates means that investment bankers must sell securities bearing lower rates of return. It also means that outstanding securities go up in value because, if we have an outstanding 5 per cent bond and the level of interest rates is 3 per cent, that 5 per cent bond will go up to 140 (a 3 per cent yield basis) unless, as is usually the case, it is of short maturity and does not reflect the full rise, or it is callable, let us say, at 105, and then cannot go up materially above its call price.

The decline in interest rates has given the investment banking business a huge volume of refunding to handle. In many cases this refunding operation has been repeated again and again, because corporate managements have been constantly replacing higher interest rate issues with lower coupon issues to take advantage of the lower level of interest rates that has been prevailing.

Current fiscal policy has affected investment banking not only through influencing the level of interest rates but also through providing investment banking institutions with a huge volume of government bonds in which they can trade and which may constitute an important part of their business. Some of the largest organizations in the investment banking machinery now devote part or all of their time to dealing in government securities. In fact, one important reason why the Treasury can finance itself with such great facility is that it can look to government bond dealers and to other dealers and brokers all over the country to help provide a market for government securities. Obviously, that part

of the investment banking business which is concerned with dealing in government bonds is bound to be very important for many years to come, because there is now a total of \$280,000,000,000 of government securities outstanding, a total that far exceeds the aggregate of all other types of securities. Since these securities will remain as major factors in investment portfolios, the government debt policy will largely influence, directly and indirectly, the business of investment banking organizations.

It is important, however, that we do not think of government debt policy merely as a matter of interest rates. There is a broad problem facing this country for the future, which we refer to as the debt management problem. The manner in which the government manages its \$280,000,000,000 debt is going to have many consequences, not only for investment banking, but for the economy as a whole.

Previously we were discussing one of those consequences. If the government issues long-term bonds, it will be able to sell its securities to insurance companies, savings banks, and individual investors. If, however, the government issues certificates of indebtedness, it will sell its securities primarily to the commercial banks, because an 11 month obligation with a $\frac{7}{8}$ of 1 per cent coupon does not interest long-term investors. A $2\frac{1}{2}$ per cent long-term bond currently does.

DIRECT REGULATION OF INVESTMENT BANKING

We have briefly considered public policy as it affects savings, public policy as it affects investment, and the question of the fiscal policy of the government in connection with interest rate control and debt management, which also has an important effect upon investment banking. We now wish to take up direct regulation of investment banking by the government.

Direct regulation of investment banking takes two main forms. First, it takes the form of the government entering the investment banking business or controlling the terms upon which capital is raised through investment banking channels.

In this sense, direct control of investment banking is effected by the government in several ways. It may do this by direct competition, as it does in the case of the Reconstruction Finance Corporation, which makes loans of government money to compete with investment bankers who raise private money for industry. We are all familiar with instances in which the Reconstruction Finance Corporation has made large loans directly to private enterprises whereby the government has engaged directly in investment banking for its own purpose.

The government can also regulate and participate directly in investment banking by guaranteeing securities, as was done under the United

States Housing Act. The government created a corporation to build houses and to sell government guaranteed bonds in lieu of the sale of ordinary obligations to investors.

The government can also participate in investment banking through its interest rate policy, as we have seen, and through the credit control policy of the Federal Reserve Bank. Interest rate and credit control policies determine the amount of money that will be available for investment and the average rate of interest at which it will be invested.

The second main type of direct regulation takes the form of special laws designed specifically for that purpose. These special laws are found both in state and federal statute books.

The states, beginning with Kansas in 1911, enacted *blue-sky laws*. These blue-sky laws are police measures laying down certain rules for the sale of securities within the state and imposing penalties for the violation of the laws. The blue-sky laws derive their name from the fact that they were designed to curb fraudulent promotions by unscrupulous individuals who, it is said, sold stock in corporations that were organized to exploit the resources of the blue sky. Generally speaking, these laws have accomplished their purpose, and at the present time 47 states have such laws. Some of them are strict, requiring that, with the exception of certain exempt securities, every issue must be qualified before it can be sold in the state. Others have wider exemptions, so that only the highly speculative and unseasoned type of security must be qualified. Needless to say, it is necessary for every investment banker to conform to the laws of the states in which he does business.

Some states do not have blue-sky laws but have antifraud laws. In New York it was feared that a blue-sky law would interfere with the functioning of the nation's primary financial center. An antifraud law was enacted whereby new issues can go forward without preliminary action; but should there be fraud discovered thereafter, rapid investigation and punishment is provided.

Until 1933, there was no federal law applicable to security frauds, with the exception of the provision imposing a penalty for the use of the mails in any scheme or artifice to defraud. However, the Post Office did not have the facilities for applying that mail fraud statute, with the result that the federal government did not play an active role in the policing of security selling.

In 1933, Congress passed the first comprehensive federal law governing security selling, the Securities Act of 1933. This law has been aptly described as a *truth in securities* law. It does not attempt to regulate the quality of the issue and high-grade, low-grade, investment, and speculative issues can all be sold under the Securities Act. All the Securities Act

does is to require disclosure of the facts concerning the issue. If the facts are disclosed, however unimpressive they may be, a security can be sold.

These facts are disclosed in two documents. They are disclosed in a registration statement that must be filed by the issuer with the Securities and Exchange Commission. They are also disclosed in a shorter document called the prospectus, which must be delivered to each buyer of the registered security before or at the time of the completion of the transaction.

In order to provide time in which the SEC may study the registration statement, within which buyers can weigh whether or not they wish to make the purchase, the Securities Act provides a 20-day waiting period between the filing of the registration statement and the effective date of such registration statement, after which date the issue may be sold. Needless to say, this 20-day waiting period may be extended to a far longer period if the SEC should call for additional information or if the SEC should issue, as it may, a stop order which halts the sale of the security until it is lifted. The 20-day waiting period, under a later amendment to the Securities Act of 1933, may be shortened by action of the SEC, but such shortening or acceleration must be by specific action.

There are certain exemptions under the Securities Act of 1933. Most issues of smaller size, in amount up to \$300,000, are exempt. Issues of the federal government, states, and municipalities as well as banks and railroads are exempt. Needless to say, in the case of those that are exempt it is far more convenient to proceed without the necessity for an elaborate registration statement.

Another federal law which profoundly and directly affects the investment banking business today is the Securities Exchange Act of 1934. Whereas the Securities Act of 1933 primarily applies to new offerings and seeks to assure adequate disclosure for the protection of investors, the Securities Exchange Act of 1934 seeks primarily to regulate trading in already issued securities.

The Securities Exchange Act of 1934 does five major things. First, it directly regulates the operations of brokers and dealers. On the exchange, it does this through regulation of exchanges themselves which are now registered under federal law; and, off the exchange, it does this largely through the National Association of Security Dealers, or NASD, an organization which regulates its own members just as the members of licensed security exchanges are regulated through those exchanges in a large measure.

Second, the Securities Exchange Act of 1934 regulates disclosure regarding listed securities. A registration statement must be filed covering listed securities, that registration statement mainly consisting of

the information that the New York Stock Exchange had required before 1934 in the listing statement of corporations that listed their securities for trading.

We will find, however, that some securities, traded on exchanges other than the New York Stock Exchange, are not listed. Those securities are said to be admitted to unlisted trading privileges. The New York Curb Exchange, to a considerable extent, trades in securities which are not formally listed, but which are admitted to unlisted trading privileges. The law provides that any exchange may admit to trading, without listing, securities that are fully listed on other exchanges. However, the New York Stock Exchange for many decades has ruled that it will only trade in issues which are fully listed.

The third thing that the Securities Exchange Act of 1934 does is that it prohibits manipulation. Section 9 of the Securities Exchange Act of 1934 is the antimanipulative section designed to bar certain practices that at times have been found to exist on and off the exchanges and which were felt to be detrimental to the public interest.

The specific types of manipulation that are prohibited are:

1. Matched orders—where transactions occur between two or more people without resulting in a change of ownership creating the appearance of activity and creating a price without actual change of ownership.

2. Wash sales—where one party sells something and then buys it back, also involving an appearance of activity and a price and no change of ownership. Such transactions are sometimes referred to as *painting the tape*, because their purpose is merely to create a record to influence others. Wash sales differ from matched orders in the number of principals involved. In the case of a wash sale one person buys and sells; in the case of matched orders, the stock passes through two or more hands, and may possibly involve a whole ring of transactions, finally returning to the original holder.

3. A series of transactions to influence the price is prohibited. This is popularly known as a pool operation, where a whole series of transactions is carried out, the purpose of which is to influence the price. If a person goes into the market and buys 10,000 shares of some stock for investment, there is utterly no objection under the law. If a person goes in and accumulates 10,000 shares over a period of time, then places some very large orders to force the price up, and then tries to sell out after the activity is stimulated, it is considered a series of transactions to influence the price, and is prohibited by Section 9 of the Securities Exchange Act of 1934. There is a difference of opinion as to how much of this pool

activity went on in the 1920's. But the record of the Senate investigation clearly showed that it did exist and, at times, to a considerable extent.

4. The Securities Exchange Act of 1934 prohibits the spread of information about market manipulation. If a person tells someone that he should buy a certain stock because "They are going to put it up," or because some well-known market operator is going to run it up, that is a violation of the law. If, however, a person tells someone that he should buy a certain stock because the company is going to earn \$8 a share next year, whereas it earned only \$5 a share last year, and that the increased earnings will possibly cause an increase in market price, that is entirely legitimate, assuming that it is approximately so or bears some semblance of truth.

5. The spread of false information about securities is prohibited. For example, to state that a certain stock should be bought because it is earning \$5 a share when it is really earning only 50 cents a share, would come under the prohibition of the law.

The fourth extremely important feature of the Securities Exchange Act of 1934 is that it authorizes the Board of Governors of the Federal Reserve System to fix margin requirements on registered securities; that is, it authorizes the Federal Reserve Board to fix the maximum amount that brokers and banks may loan on these securities. Early in 1945, a loan of 60 per cent was permitted, which meant that the margin requirement was 40 per cent. In the course of the same year, the margin requirement was raised to 75 per cent, and recently it has been raised to 100 per cent by simply saying that brokers and banks may lend nothing on registered securities if the funds are to be used for the purchase of those or other securities. Margin requirements are determined by the Board of Governors of the Federal Reserve System, because this is felt to be a credit control function; but the authority is found in the Securities Exchange Act of 1934.

Fifth, the Securities Exchange Act of 1934 has several provisions that affect corporations. These provisions affect the use of proxies by corporations whose securities are listed on licensed exchanges. Thus, any corporation that sends out a proxy statement or request for proxies to the stockholders must file it with the SEC. These provisions were included to prevent certain practices which were felt to be detrimental to the interests of the stockholder. They require, among other things, that the entire proxy letter shall be in legible type and that provision be made in the proxy for voting *yes* or *no* on the matter being voted on.

The Securities Exchange Act of 1934 also limits trading by corporate officers, directors, and principal stockholders in the corporation's stock

and requires that publicity be given to such trading, which may be found either in the compilation issued by the SEC or in the newspapers that print such information. A principal stockholder under this law is any person who owns 10 per cent or more of any class of equity securities of any one corporation.

All these provisions of the Securities Exchange Act of 1934 were enacted by Congress with the intention of securing a free and open market. It was felt that a free and open market could be assured by regulating exchanges and over-the-counter dealers; by requiring disclosure; by listing securities; by limiting the use of credit for the purpose of buying on margin, which it was felt would disrupt trading at times; by stopping manipulation, which could interfere with a free and open market; and by improving the standard of corporate practices and the relation of stockholders to the corporation.

Both the Securities Act of 1933 and the Securities Exchange Act of 1934 have been criticized at times, and Congress has amended them in several respects in response to such criticism.

The Public Utility Holding Company Act of 1935 simplified the rules of investment banking to a limited extent, clarified the issues of registered holding and operation, and required that public utility companies registered under the Securities Act of 1933 conform to the standards established by the Public Utility Holding Company Act of 1935. Therefore, plans of simplification of the rules of investment banking and the refinancing of public utility holding companies are passed on separately by the Commission, and are in the public interest and

INVESTMENT BANKING

We have been concerned with investment banking machinery in a number of matters which were the subject of discussions. However, it is not entirely clear that the existing machinery is extricably a part of the system which serves the need.

No system of investment banking is essential for expansion of the capital function of the financial system.

3. What are the principal influences determining the rate at which current savings are invested?
4. What are the main sources of capital?
5. Name and describe briefly the four principal functions of the investment banker.
6. Explain the statement, "The function of capital formation is a merchandising function."
7. Explain the term "underwriting." Distinguish between the two general types of underwriting.
8. Distinguish between brokers and dealers in the legal sense.
9. What is the distinction between "auction" and "negotiated" markets?
10. Define the following terms: floor broker; specialist; odd lot dealer.
11. Define and give an example of a special offering.
12. What is an investing institution? Name at least three kinds.
13. What are the four main functions of an investing institution?
14. What is the fundamental distinction between a savings bank and a trust company?
15. What is meant by the phrases: (a) Legal for investment by New York savings banks? (b) Prudent man rule?
16. Define the term "investment trust" and briefly distinguish between the two types.
17. What is meant by the term "investment counsel"?
18. Explain the supervision by the federal government of investment trusts.
19. Explain the distinction between investing institutions and institutional investors.
20. How do commercial banks create secondary demand?
21. What are the Federal Reserve banks holding more than 50 per cent of the government securities?
22. How does monetary policy affect: (a) Investment of funds? (b) Investment of interest rates?
23. How does the government affect the investment of funds?
24. What is the fundamental purpose of the Securities Act of 1933?
25. What two documents are the details of an issue disclosed?
26. Which securities are exempt from the Securities Act of 1933?
27. Name four of the five major regulatory features of the Securities Exchange Act of 1934.
28. What is the difference between a matched order and a wash sale?
29. How does the Act attempt to prevent officers, directors, and large stockholders from taking advantage of general shareholders?

and requires that publicity be given to such trading, which may be found either in the compilation issued by the SEC or in the newspapers that print such information. A principal stockholder under this law is any person who owns 10 per cent or more of any class of equity securities of any one corporation.

All these provisions of the Securities Exchange Act of 1934 were enacted by Congress with the intention of securing a free and open market. It was felt that a free and open market could be assured by regulating exchanges and over-the-counter dealers; by requiring disclosure; by listing securities; by limiting the use of credit for the purpose of buying on margin, which it was felt would disrupt trading at times; by stopping manipulation, which could interfere with a free and open market; and by improving the standard of corporate practices and the relation of stockholders to the corporation.

Both the Securities Act of 1933 and the Securities Exchange Act of 1934 have been criticized at times, and Congress has amended them in several respects in response to such criticism, but not in all respects.

The Public Utility Holding Company Act of 1935 has also affected investment banking to a limited extent, chiefly by requiring that security issues of registered holding and operating companies shall not only be registered under the Securities Act of 1933 but also shall conform to the standards established by the Public Utility Holding Company Act of 1935. Therefore, plans of simplification, plans of integration, plans for refinancing of public utility holding companies and operating companies are passed on separately by the SEC under this law to assure that they are in the public interest and that they meet the standards in the statute.

INVESTMENT BANKING AND PRIVATE ENTERPRISE

We have been concerned thus far with a broad survey of our investment banking machinery, and we have touched briefly on a great number of matters which will be examined in much greater detail in subsequent discussions. However, in closing this chapter let us say that it seems entirely clear that this highly complex investment banking system is inextricably a part of our private enterprise system and that it likewise serves the needs of government.

No system of private enterprise can exist unless it is able to raise capital for expansion, for new business, and for new products. This is the function of an efficient and economically operated investment banking system as typified by the system we have been surveying.

REVIEW QUESTIONS

1. Define: (a) capital; (b) capitalistic system; (c) free enterprise.
2. Distinguish between savings and investment in the economic sense.

3. What are the principal influences determining the rate at which current savings are invested?
4. What are the main sources of capital?
5. Name and describe briefly the four principal functions of the investment banker.
6. Explain the statement, "The function of capital formation is a merchandising function."
7. Explain the term "underwriting." Distinguish between the two general types of underwriting.
8. Distinguish between brokers and dealers in the legal sense.
9. What is the distinction between "auction" and "negotiated" markets?
10. Define the following terms: floor broker; specialist; odd lot dealer.
11. Define and give an example of a special offering.
12. What is an investing institution? Name at least three kinds.
13. What are the four main functions of an investing institution?
14. What is the fundamental distinction between a savings bank and a trust company?
15. What is meant by the phrases: (a) Legal for investment by New York savings banks? (b) Prudent man rule?
16. Define the term "investment trust" and briefly distinguish between the two main types.
17. What is meant by the term "investment counsel"?
18. Is there any regulation by the federal government of investment trusts and investment counselors? Explain.
19. Distinguish between investing institutions and institutional investors.
20. In what two ways can a commercial bank create secondary demand deposits?
21. Discuss the advisability of commercial banks holding more than 50 per cent of the federal securities.
22. Name several ways in which public policy affects: (a) Investment of savings. (b) Volume of savings.
23. What is meant by "artificial control" of interest rates?
24. In what two forms does the government affect the investment banking business?
25. What was the fundamental purpose of the Securities Act of 1933?
26. In what two documents are the details of an issue disclosed?
27. What securities are exempt from the Securities Act of 1933?
28. Name four of the five major regulatory features of the Securities Exchange Act of 1934.
29. What is the difference between a matched order and a wash sale?
30. How does the Act attempt to prevent officers, directors, and large stockholders from taking advantage of general shareholders?

THE INSTRUMENTS OF INVESTMENT BANKING

by Dr. Harry G. Guthmann, *Professor of Finance,*
School of Commerce, Northwestern University

THIS CHAPTER will deal with the things we have chosen to call the instruments of investment banking, namely, *corporation stocks* and *corporation bonds*. For our purposes, we may call these two broad classes of corporation securities the instruments, or the tools, which the corporation, as issuer, with the help of the investment banker, as underwriter and distributor, applies to the solution of its financial problems. In a related sense, which is extremely important, they are the *merchandise* of the investment banker with which we will be dealing every day.

Broadly, we may distinguish between stocks and bonds by stating that *stocks represent ownership, or equity, in a corporation* and are issued by every incorporated business. On the other hand, *bonds represent indebtedness* and may or may not be issued, depending upon the financial requirements of the corporation.

CORPORATION STOCK

We will direct our attention immediately to the *stock certificate* which is the physical and legal evidence of stock ownership. It is advisable to refer to a good standard text and note the kinds of information one would expect to find on the face and on the back of this instrument, and further, to examine some certificates themselves. In any event, the face will bear the name of the issuing corporation, of the owner of the stock (the name in which it is *registered*), and the number and kind of shares which the certificate represents. On the back of the certificate is a conventional blank form of assignment which the stockholder executes when he desires to transfer all or part of his stock.

The matter of registration is, of course, important, aside from the fact that it indicates ownership because one has to be the registered owner to receive dividends and in order to vote, the matter of dividends being of extreme importance to most people and the matter of voting to many

people. The actual registration and transfer is usually handled by a trust company appointed by the corporation to act as *transfer agent*, whose actions may be supplemented by a second trust company which acts as *registrar*. A typical transfer involves the endorsement of a certificate by the owner, presentation to the transfer agent for cancellation and issuance of a new certificate in the new owner's name, and affixing the signature of the registrar. Obviously, the registrar will keep a record of the names in which the outstanding stock is registered.

We have mentioned the fact that when and if dividends are paid they are paid to the registered owner. Actually, when the board of directors of a corporation declares a dividend, a public announcement is made, and on a specified day after the declaration a list of stockholders is prepared to whom the dividend will be paid. This is done in order to enable holders of stock which has not been transferred to complete such transfer and thus establish their ownership and right to the dividend as a matter of record. It is important to remember that only stockholders of record as of the close of business on the specified day receive the dividend and the person who buys the stock on the following day will acquire it without the right to the dividend because he is not the stockholder of record. Consequently, what would one expect to happen to the price of the stock on the day after it went *ex-dividend*, as we call it?

The answer is that the market price will tend to decline by an amount equal to the dividend, the reason being that the buyer who purchases before the date of record acquires not only a share in the business but the right to the dividend. The person who buys after the date of record buys it *ex-dividend*, that is, without that additional right. In actual trading practice, of course, a stock goes *ex-dividend* several days before the date of record, as it usually takes not less than two days for a stock to go through transfer.

At this time it might be helpful to discuss briefly the importance of exercising care in the handling of stock certificates. Strictly speaking, a stock certificate is not a truly negotiable instrument, since it represents a share in a business and not a claim to a definite dollar sum. However, for our purposes we may say that a stock certificate is negotiable in character because it has been given many of the attributes which adhere to the negotiable instrument, and if a certificate which is endorsed in blank or in bearer form comes into the hands of an innocent third party, that party will have a good and legal title. The endorsement, of course, must be made by the person whose name appears on the face of the certificate, and it is customary to have the signature of the endorser guaranteed by a bank or broker in order to assure its genuineness. It is certainly advisable to ascertain from an appropriate source the routine

matters of precaution which are observed in handling stock certificates, because any individual or house assumes a certain amount of responsibility in this regard which must be undertaken properly.

TERMINOLOGY

Capital stock is sometimes defined as the aggregate ownership interest of the corporation. However, we will find that the term *capital* is loosely used and in some cases confusion is liable to arise. In order to clarify this as well as some related terms, let us take the following simple balance sheet.

ASSETS		LIABILITIES	
Cash	\$ 5,000	Accounts payable	\$ 5,000
Accounts receivable	10,000	Accrued taxes	4,000
Inventory	10,000	Bonds outstanding	6,000
Plant and equipment	\$15,000	Capital stock	15,000
Less reserve for depreciation	5,000	Surplus	5,000
Net plant	10,000		
Total		Total	
\$35,000		\$35,000	

In this particular case we may say that the ownership interest or *net worth* is \$20,000 (the total of capital stock and surplus, or the excess of assets over liabilities), and if this corporation has only one kind of stock, common stock, we might call this the *common stock equity*. Generally speaking, when an accountant uses the term *capital* he is referring to *net worth*, on the basis of which the *book value* of a stock is determined. Frequently, however, businessmen apply the term to mean the total assets of a business, in this case \$35,000. And again, the economist is inclined to think of capital in terms of wealth used to produce further wealth, or goods used in the production of other goods, confining the application to tangible assets alone. In this sense it would be more appropriate to use the term *economic capital* or *production goods*. In the above case, these consist of inventory and plant and equipment. Finally, in the legal sense, *capital* usually refers to the single item of capital stock in terms of its par value, or declared value if it has no par. This amount was shown at \$15,000 in the above balance sheet. Certainly we shall avoid confusion if we use respectively the terms (1) *net worth*, (2) *assets*, (3) *producers' goods*, and (4) *capital stock outstanding or par or stated value of stock outstanding* in our discussions.

Capitalization is another term which seems to have a variety of meanings. Strictly the capitalization of a corporation is the sum of the par value of the stocks and bonds outstanding. When the stock has no par value it is customary to express the capitalization in terms of the

number of shares outstanding or at a stated value per share. The term is further used to describe the process of setting up property on the books of the company. That is, when an expenditure is made which results in an asset being set up we say that the expenditure has been capitalized. Naturally the valuation of such assets as capitalized is related, although not precisely, to the amount of capitalization in the sense of securities outstanding; since the more the assets, the greater the amount of securities likely to be outstanding. A third use of the term *capitalization* is encountered when we discuss *capitalization of income*, which simply involves estimating the present investment value of a property on the basis of anticipated or predicted income from the property in relation to what is considered a fair return for that type of investment.

Capital structure is a phrase which we use to describe the entire investment of bondholders and stockholders including surplus, which, if we refer to our balance sheet, would in this case be \$26,000. Because so much of the stockholders' share of the business is carried under the heading of surplus in some corporate balance sheets, the capitalization alone (first use) would give a wholly inadequate idea of the total bond and stockholder investment.

PAR VALUE

The par value of a share of stock is the sum named in the corporation's charter as the nominal value for less than which the stock may not be issued without incurring personal liability on the part of the stockholders for any unpaid balance. Further, the excess of assets over liabilities may not be reduced beyond this amount by the payment of dividends. With the exception of these two requirements, the conception of par value has come to lose much of its significance for the following reasons:

1. In the case of a par-value stock issued in exchange for property instead of cash the valuation of such property is sometimes arbitrary and often debatable.
2. Only a fraction of the total paid for the stock when issued may be represented on the balance sheet by the par value. In this case we shall find a paid-in surplus that may greatly exceed the nominal par value, which is very often quite low.
3. Even if the original stockholders' investment was exactly par, earnings and losses continually modify the original value of the stock.
4. From the investor's point of view, fair market value is more important than par value.

We may generally say that for these among other reasons there has been a great number of corporations which have issued stocks with no par value, and consequently it is necessary that we clearly understand the distinctions between par-value stock and no-par stock.

Let us take a case in which a corporation sells one share of common stock for \$100 and examine the three different ways in which the corporation can set this up on its books.

Method 1 would be to issue one share with a par value of \$100 equal to the original contribution. In other words, the owner's interest would appear entirely under the heading of *capital stock* in the balance sheet. Until such time as money was earned and left in the business and there was an earned surplus, the total equity would be represented by that single account. There would be no surplus under this method at the time the business starts.

Method 2 involves the use of no-par stock with a stated value. In this process the corporation is limited by the law of the state in which it is incorporated as well as by its charter. However, the procedure would simply be to issue the one share of no-par stock for \$100, to show a stated value of, say, \$5 for the capital stock account and carry \$95 as *paid-in surplus*.

Method 3 is to use a low or nominal par by means of which it has been possible in many cases to minimize certain taxes. If we are to give this share of stock a par value of \$1, the paid-in surplus will, of course, be \$99.

In any event it is incorrect to say that the par value is a matter of weight in determining the value of our share of stock in any of the three situations described above. Certainly, beyond its book value, which is entirely apart from its par value (and is the same in each case), the market value or market appraisal is by far the most significant and is of the deepest interest to us.

Briefly, we may say that the most important reason for using no-par or very low par stock from the practical angle of corporation financing is the probability of freedom which it gives the corporation in subsequent stock issues. In other words, when a corporation has a stock with a par value it is practically forbidden to issue new stock for a consideration less than that par value; and if the par value is substantial, it would be impracticable to attempt to issue stock for the full par value if the market value should happen to be considerably less. If the stock had no par or a low par value, the corporation would be free to price subsequent offerings of the same stock at any price the market will accept, subject to any legal minimum that the law or charter might establish.

PREFERRED STOCK

The subject of preferred stock is one with which we must be thoroughly familiar, not only the various types and classes of preferred stock and the characteristics of each, but also the technical features involved in conversion when we have a convertible type preferred.

Usually, when a corporation has issued a preferred stock in addition to its common shares, we find that this has been done in order to give the preferred shareholders a prior claim to the earnings. Thus we may say that the distinguishing feature of *preferred* or *preference* stock is its prior right to dividends as opposed to the residual claim of the *common* stock.

It is further true that a corporation may issue more than one class of preferred stock, and these classes may have an equal claim to the earnings or they may have successive priority as to the right to dividends. In any case their rights must be satisfied before a distribution on common stock is made. However, in spite of the priority which the preferred stock enjoys we must remember that it is not compulsory to pay a preferred stock dividend should earnings not justify a disbursement, or should the directors decide that it would be advantageous to omit such dividend even though adequate earnings have accrued. When we discuss bonds we will find that failure to meet their interest requirements will throw the corporation into default and insolvency; however, this is not true if the corporation fails to meet the requirements of any one or several dividends on its preferred stock.

This does not mean that the preferred stock is entirely without rights, however, and we find that the great majority of preferred stock is *cumulative*. That is, provision is made for any unpaid dividends to accumulate, giving the holder of this cumulative preferred stock a claim to full satisfaction of the entire amount of unpaid dividends before any payment is made to the holders of common stock. This is a feature of considerable strength to the preferred stockholder and accounts for the fact that there are relatively few issues of *noncumulative* preferred, although they do exist.

The point in regard to *noncumulative* issues simply is that regardless of the strength of the issuing corporation, the lack of a cumulative feature materially weakens the position of the holder and thus makes such a security less attractive to purchasers than if it carried the cumulative feature. Ordinarily we find noncumulative preferred stocks only in cases where the holder has had to accept such stock because of some trouble the company has gone through and he has been given these weak securities because it was the best offer the company could make in satisfying his claim.

PARTICIPATING PREFERRED

Ordinarily, when the dividend requirements of a preferred stock have been satisfied and payment at the indicated rate has been made in full to the holders thereof, they have no right to participate in a further division of earnings. Any earnings above and beyond the requirements of the preferred usually will be left entirely to the claims of the common stock.

However, in certain instances we have *participating preferred stock* which has the right, subject to certain limitations, to participate in the company's earnings beyond the specific dividend to which it has prior claim. There are many methods by which this participation is provided. We may find that the participating preferred has an equal share of the earnings after a certain payment has been made on the common stock. Or we may find that the preferred may participate in the earnings only up to a certain point after which the common has the sole claim. Frequently, we find provisions whereby the company is able to call and redeem this type of issue. Certainly we should carefully examine the features of any participating preferred stock with which we might be concerned, remembering that the participating feature is usually added where the element of risk makes it advisable to offer some added inducement to attract investors.

CONVERTIBLE PREFERRED

In discussing the conversion feature which is characteristic of many preferred stocks, we are discussing a question on which we shall from time to time find it necessary to advise our clients. Briefly, a *convertible preferred stock* is one which provides that the holder, at his option, has the right to convert his preferred share into a certain number of common shares. This feature is included as an added inducement to the purchaser of the issue.

Let us consider the various possible situations in which it is logical for the holder to exercise the right to convert.

Possibly the most common situation in which conversion takes place is *when the income on the common stock is enough greater than the income on the preferred to compensate for the greater risk involved in holding the common*. When we use the term *income*, of course, it is important to remember that we are referring to actual *dividends* and not to earnings. Naturally, the question of just how much additional income will compensate for additional risk is a matter of judgment which the holder must exercise.

As an example of the above situation, however, let us assume that we hold a 3½ per cent preferred of \$100 par value convertible into 4 shares

of common stock at our option. Our income from the preferred is \$3.50. If the common were paying a dividend of \$1.40 per share, we would be able to convert into 4 shares of common and receive income of \$5.60 as opposed to \$3.50. Under ordinary circumstances we would convert with the feeling that additional income of \$2.10 would be sufficient to compensate for the added risk.

A convertible preferred share should always sell at a price that reflects at the least the investment worth of its preferred dividend income. But it also should sell at not less than its *conversion value*, that is, the market value of the common stock into which it is convertible. Thus, a 4 per cent preferred stock might be worth only \$100 without the conversion privilege, but if it is convertible into 2 shares of common and the common has a market price of \$75 per share, then the preferred should sell for at least \$150, or its conversion value. If, through any chance, it should temporarily sell at less than that figure, an opportunity for *arbitrage* would arise. That is, an alert broker, or market operator, could buy the preferred at its bargain price of under \$150 and simultaneously sell the two shares of common, which could be obtained by conversion, for \$150 at a profit. The possibility of such arbitrage will normally keep a convertible security up to its conversion value. The reverse will not be true, because common stock cannot be exchanged or converted into preferred.

A second situation in which conversion takes place is *when the preferred is called and the market value of the common into which it may be converted is greater than the call price of the preferred*. Obviously the holder in this situation should convert into common and either sell or hold the common as he may desire.

A third situation in which conversion is more or less forced, even though the income is not compensatory, is *when the conversion privilege is about to expire or (as is often provided) the ratio at which conversion can be made is about to change unfavorably for the holder*. Naturally, the limiting factor in this situation is again the value of the common, and if the conversion privilege were about to expire we would not exercise it if it is not worth anything. If, however, we have a common selling at 115, for example, into which we could convert one share of preferred, which latter share we feel would be worth substantially less than 115 after the conversion privilege expires, we should convert.

In the case of a conversion ratio which is about to change unfavorably for the holder we may take as an example a certain company which had a preferred stock convertible at the rate of 1 share of preferred, worth substantially \$100, into 20 shares of common. On a specified date this ratio was to change so that the preferred holder would receive only 16

shares of common rather than 20. For a period of years the common had not paid dividends and had never been worth enough to make conversion profitable. However, as the time for the change in the conversion ratio approached, the common rose in price and was selling fractionally above \$6 per share, so that 20 shares were worth considerably more than \$100. The result was that holders who were alert converted and received this additional value, which amounted in some cases to as much as \$125. Clearly, it was advantageous to convert prior to the change in conversion ratio after which the holder would receive only the value derived from 16 shares. The question of whether the holder should hold the common after he has converted is, of course, dependent upon his desires and requirements. From a practical point of view, the holder who wished to take advantage of conversion without holding the common might simply sell the preferred since its market price will most generally reflect the value of the conversion privilege, as explained above. If the preferred should sell for less than its conversion value, the holder can make the conversion and then actually sell the common.

A fourth situation in which conversion is desirable is *when the common stock enjoys some privilege of a special nature which does not adhere to the preferred, and in the event that such privilege provides adequate consideration for the risk involved in holding the common*. A typical situation of this sort would be one in which the holders of common stock were receiving attractive rights to subscribe to new issues.

Before leaving this subject we must emphasize that in any event the holder will actually convert only if he can do so more profitably than by selling the convertible issue and buying the issue into which it is convertible in the open market, taking into consideration the cost of switching in this manner. For instance, if we hold a \$5 preferred selling at 100 convertible into 1 share of common paying currently \$8 selling at 95, we would not convert directly but would sell the preferred and buy the common (1) if the \$5 price differential were enough to cover the costs of the transaction plus a profit, and (2) if the increase in income justified in our minds the additional risk in holding the common. Ordinarily, the market will value the two securities on a relatively equal basis, although any discrepancy should be carefully noted. If a holder is not legally permitted to hold common stocks or does not desire to hold the common, the choice will be in continuing to hold the preferred or disposing of it at the time he can get the most for his convertible interest.

NONCUMULATIVE PREFERRED

As we have mentioned previously, the noncumulative feature has the effect of detracting from the strength which we associate with the usual

conception of preferred stock. Unlike the cumulative preferred, once a dividend has been passed the noncumulative stock carries with it no further claim to that dividend. That is, the passed dividends do not accumulate. It is interesting to note that certain court decisions involving the rights of noncumulative preferred in relation to dividends which were omitted during years in which the dividend was wholly or partially earned have differed in their treatment of and effect on this principle. Currently, it may be said that court decisions have tended to support the principle that the declaration of dividends is discretionary with the board of directors and that noncumulative preferred stocks do not enjoy the right to cumulative dividends regardless of earnings. Naturally, however, it retains its preference over the common stock in any year in which dividends are declared.

VOTING POWER AND PROTECTIVE PROVISIONS

Generally speaking, recent practice has been to limit and sometimes entirely eliminate the rights of preferred stock in the matter of voting. It should be noted, however, that when this has not been done specifically the preferred stock will enjoy the same rights as any other class of stock, namely one vote for each share. Normally, we find the feeling that because of the added security presumably adhering to its preferred position this stock should have no active role in the management of a company unless its preferred position becomes a matter of question. In any case we should be thoroughly familiar with the voting rights of any preferred stock in which we have an interest, in view of the fact that these rights vary considerably.

The protective provisions that frequently compensate for any limitations on voting rights are likewise varied and should be thoroughly understood with regard to the specific stock we are handling. Frequently, we will find that the consent of the preferred stockholders is required before the company can issue any new securities with a prior or equal claim to its earnings. The protection this type of provision affords is obvious. Another common provision is one which provides for the gradual retirement by redemption of the preferred stock—a provision which has the effect of strengthening the issue but which may come into operation at a time when the holder has a continuing interest that he would like to retain. Usually compensation is provided in the form of a premium above par, which must be paid to the holder of shares so redeemed. A third common provision grants the preferred stock prior rights not only as to earnings but also as to assets in the event of liquidation. There are many other protective provisions with which we should be familiar involving

the creation of debt or the issuance of additional preferred shares, various ratios which must be met before dividends may be paid on stocks ranking junior to the preferred current assets to current debt, net current assets to outstanding preferred requirements that total assets be maintained at a specified level, reserve requirements, and board representation under certain conditions.

CORPORATION BONDS

Our discussion thus far has involved corporate stocks or, in other words, the instruments by means of which *ownership* is created. We shall now devote our attention to corporate bonds, or instruments of long-term indebtedness, by means of which the corporation *borrow*s from the investor or purchaser. Thus, our first distinction is that the bondholder is a *creditor* while the stockholder is an *owner*, the former having a fixed and prior claim to interest and principal, the latter having a residual claim to the income and assets which remain after the bondholders are satisfied. While the stockholder receives earnings in the form of dividends, the bondholder's return is in the form of interest which he receives in payment for the use of his money.

To discuss this further, the first point we make is that the bondholder has a prior claim over the claims of the owner. This, of course, is true for any indebtedness and it is also true for any owners who are preferred stockholders.

The second point we make is that the interest on bonded debt is a *fixed charge* rather than a *contingent charge* and must be met in order for the corporation to avoid insolvency. In fact, a *fixed charge* may be defined as one that has to be met in order to avoid bankruptcy. A *contingent charge*, on the other hand, is one which is contingent upon action by the board of directors and the earnings of the company. Thus, we may say that a preferred dividend is a contingent charge while the interest charge on a bond issue is a fixed charge. (Income bonds, an exception to this, will be discussed later.)

The third point to consider is that bond interest is a stipulated amount. It is fixed and not variable, and while this may be true of preferred stocks, it is certainly not true of common stocks.

The fourth consideration is that with few exceptions bonds have a definite maturity at which time the principal becomes due and must be repaid. This is not true of equities.

Finally, we must understand that bondholders have no voting power or voice unless their requirements as to interest and principal are not met by the debtor corporation.

As a matter of terminology we may say that in this discussion we are

concerned solely with *long-term credits*, that is, credits extended for one year or more. Within this definition we may refer to instruments of credit having a maturity from 1 to 10 years as *notes*. The total of bonds and notes issued by a corporation is referred to as its *funded debt*.

REASONS FOR ISSUING BONDS

It is important that we examine and understand the reasons that are offered for the possible use of bonds rather than stock in corporate financing. We note that the corporation that employs debt is always assuming a risk, the risk being that it may be unable either to pay the interest as it comes due or the principal at maturity date; and very often we might add a third risk, that it may be unable to make sinking fund payments in case they are definitely required. (The sinking fund will be fully discussed later.) Therefore, we must have sound reasons for issuing bonds.

The first reason advanced in favor of using bonds is that *the funds derived therefrom are obtained more cheaply than the funds derived from stock*. We may say that the annual cost of bonded debt is usually lower than the annual cost of stock issues, because ordinarily the investor will accept a lower rate of return on a bond to which he attaches less risk than to a stock. We find upon examination that comparable corporations are currently paying rather more when they issue a preferred stock than a bond. If we make a longer term comparison of bonds and preferred stocks, we must be careful to compare financing which has been carried out more or less at the same time—in other words, when the money market conditions prevailing were common to both.

When we compare the cost of bonds and common stock the problem is possibly more complicated. For instance, we might have a company which is currently paying no dividends on its common but whose stock enjoys a good market because there are sound prospects for good earnings and dividends. In this case, while a stock issue might bring a respectable price, it would probably be advisable to sell bonds and thus avoid further division of the prospective earnings among additional stockholders—if the prospects are soundly evaluated. If, on the other hand, the stock of this company has been bid up out of all proportion to its prospective earnings as a result of general market buoyancy, it might be inadvisable and even dangerous to resort to a bond issue, and in this case we could certainly not say that a bond issue would be cheaper. In comparing the cost of a common stock issue with that of a bond issue, the management will compare the prospective earnings (not the dividend) which will go to the stock buyer with the interest that would have to be paid a bond buyer.

The second reason advanced in favor of a judicious use of bonded debt

is that by so doing *the corporation may trade on equity*. Trading on equity simply involves the acquisition of borrowed funds or money from a preferred stock issue on the strength of the investment of the owners in order to make a profit on that investment. In other words, it is the hope and aim of the company that it can get money from bondholders or from preferred stockholders, and earn a higher return on the money than it is paying for its use, and thereby increase the profits to the common stockholder—the investment of the common stockholder serving as a protection to the bonds or the preferred stock as the case may be.

One of the results of trading on equity is that the fluctuations of return to the common stockholder are increased. In good years the earnings are increased beyond what could normally be earned on the net worth alone. In bad years the return is correspondingly lower in view of the prior claims involved. For this reason we sometimes apply the term *leverage* to describe a situation where there is a large amount of borrowed money or preferred stock money with which to operate to the benefit or detriment of the common stockholders.

As an illustration of the greater range of fluctuation which results when trading on equity, let us take two simple cases. In each case we will assume an average year with earnings of 6% on invested funds, a prosperous year with earnings of 10%, and a poor year in which we break even, or earnings of 0%. We will further assume that we have issued common stock in the amount of \$100,000 and wish to employ an additional \$100,000. Our problem is to determine the effect that a bond issue at 4% will have as opposed to an additional stock issue in this amount.

Case I

Common stock		\$200,000
Average year	6%	12,000
Prosperous year	10%	20,000
Poor year	0%	—

Case II

Common stock	\$100,000
4% bonds	100,000
Average year 6%	12,000
Less bond interest	4,000
Net earnings on common	8,000 or 8%
Prosperous year 10%	20,000
Less bond interest	4,000
Net earnings on common	16,000 or 16%
Poor year 0%	—
Less bond interest	4,000
Net loss on common	—4,000 or —4%

We will note in comparing the two cases that the range in net earnings percentagewise for Case I is between 0 and 10%. In Case II, in which we trade on equity, the range is from — 4 to 16%, and we are here forced to absorb a loss resulting from our fixed charges. The results would have been the same if we had used a preferred stock, the difference from a practical point of view being that if we had used preferred stock we could have passed that dividend in our deficit year and then have made it up in a later good year with no threat to solvency.

To sum up the matter of trading on equity, we may make three points which should be kept in mind:

1. Trading on equity increases the fluctuations in the earnings on the common stock.
2. It creates the hazard of insolvency or in the case of preferred stock the hazard of an accumulation of back dividends.
3. Success is usually measured by the excess of earnings over the cost of the prior claim.

The third reason offered in favor of the issuance of bonds rather than common stock is that *the sources of funds are thereby enlarged*. In fact, for many corporations that are not too large, this may be the only way in which funds can be raised practically. The smaller the corporation the harder it is to dispose of an ordinary stock issue; and while in such cases it may still be something of a job to sell even a bond issue, such an issue will be relatively easier to sell than stock. Further, when financial conditions are adverse and markets are bad, it will be relatively easier to sell bonds than stock regardless of the size of the company. And finally, in regard to this point, we must realize that a vast source of funds lies in financial institutions such as banks and insurance companies which are limited as to the types of investment they may buy. Thus, if we are to tap this source we must do it by means of credit instruments rather than by issuing stock.

The fourth point offered is that *by issuing bonds we are able to secure long-term funds without diluting the voting power of our stock*. Obviously, this is of importance only where the question of voting power is of great importance. However, in the case of most large corporations the voting power is most likely to be widely distributed and its further diffusion represents no great problem—in fact sometimes creates a definite advantage for those in control. Consequently, this point is of most interest to the smaller corporation where the voting power is in a few hands which desire to maintain absolute control of the management.

LIMITS ON THE USE OF BONDS

There are certain limits on the extent to which a corporation may resort to permanent borrowing, not the least important of which is usage and custom of the market—the attitude of the investors with whom it is intended to place the loan. In the case of institutional investors, these customs tend to become expressed in rules of thought which, if broken, result in making an issue unmarketable or at least difficult to market. A second limitation is that a company should not create a long-term debt beyond its ability to meet the resulting fixed charges with a high degree of certainty. In other words, it should feel certain of a stable income sufficient to service the debt. A third limitation is based on the fact that as borrowings increase the interest rate tends to increase also, and beyond a certain point the cost of the borrowed funds becomes prohibitive. Obviously, conditions might prevail in the money market which would at times prevent the issuance of bonds simply because interest rates were prohibitively high.

GENERAL FORM OF BONDS

It will be advisable to examine some actual bonds and thereby become familiar with the information that is characteristically recited in the instrument. It must be noted, however, that the bond itself does not set forth all the details and provisions of the borrowing. These are contained in the *indenture*, or basic contract between the issuing corporation and the trustee. The bond itself merely summarizes the main terms of the loan and contains a promise to pay a specific amount of the debt with interest.

The bond naturally carries a title which includes the full name of the issuing company, an indication of the nature of the security, the rate of interest, and the date of maturity. The first clause contains the promise to pay a principal sum on the maturity date, the usual denomination being \$1,000 although some of the bonds of an issue may be in pieces of \$500 and \$100. The money of payment is also stated, and in this country since 1933 is merely stated to be "lawful money of the United States of America." When we find bonds containing a *gold clause* requiring payment in gold which was formerly customary, we will recall that by a decision of the Supreme Court in 1933 a federal law invalidating the gold clause was sustained as the law of the land.

The interest rate is expressed as a percentage of the face amount of the bond, the practice being that the market will adjust the price of the bond in such a way that the fixed return finally represents a yield in line with the money market, the credit standing of the company, and the merits of

the particular issue. (The matter of investment yield will be discussed more fully in another section.)

Bonds may be issued in coupon or registered form. The coupon bond is payable to the bearer of same on presentation at maturity and contains interest coupons which are presented for payment on interest dates, usually at a specified banking institution. Only a small percentage of bonds are in registered form; however, when a bond is registered as to principal and interest, the name of the legal owner is inscribed on the bond and entered in the books of the trustee or corporation, interest payments being made by mailed check. The ownership of a registered bond may only be transferred upon the order of the current owner, and a process of transfer must be carried out similar to the transfer of stock certificates. All bonds, whether registered or bearer, carry a serial number as a mark of identification, the coupons carrying the same serial number as the bond to which they are affixed. The bond also contains a brief statement of the nature of the security for the bond and a description of any redemption or conversion features which might exist. It is normally signed by the proper officers of the corporation and by the trustee.

MORTGAGE BONDS

In some instances bonds may be unsecured, in which case they are merely a general credit obligation of the issuing corporation. On the other hand, bonds are frequently secured by a claim or lien on certain of the corporation's properties. While real estate is most commonly used as security, any other type of property might properly be the subject of a lien. We may say that real estate, due to its relative permanency in the possession of a corporation, is perhaps the most suitable security. Most frequently, when personal or movable property is pledged, it is in the form of either stocks or bonds. When land plus buildings, and such improvements as are affixed to the land, have been pledged as the security, the result is a mortgage bond issue.

A *mortgage* is simply an instrument which pledges real property to secure a debt. The debt itself is not represented by the mortgage but is evidenced by a note, or in the case of a corporation by a bond issue. A corporate mortgage bond itself is simply evidence of the promise of a corporation to pay interest and principal which is secured by a mortgage on specifically designated real property. It will be noted that under a mortgage the original owner of the real property retains control and possession, the essential nature of the mortgage being that of a pledge. The person to whom the mortgage is given as a pledge, of course, has the right of foreclosure, that is, the right to have the property sold to satisfy the debt in case of default. Upon foreclosure, if the proceeds from the sale

of the property do not fully satisfy the debt, the holder of the mortgage then has further claim, on a parity with the general creditors, upon such other unpledged assets as may be necessary for his satisfaction. Conversely, should the proceeds more than satisfy the debt, the holder of the mortgage has no claim to those proceeds beyond the amount of the debt.

As a matter of terminology, we refer to the person who gives the mortgage as the *mortgagor* and the person who receives the mortgage as the *mortgagee*. In the case of a mortgage bond issue, the mortgage is usually given to a third party who acts as trustee for the bondholders, and we have a relationship involving the debtor corporation, the trustee, and the bondholder which is defined in the *indenture* or *trust agreement*. Included in the indenture are:

1. The form of the bond and coupon instruments.
2. A complete description of the pledged property.
3. The authorized amount of the bond issue. (If the current issue is less in amount than that authorized, the conditions under which future issues may be made are outlined.)
4. The various protecting clauses or covenants relating to restrictions on future indebtedness, restrictions on payments of dividends, maintenance of insurance, taxes, and so on.
5. Provisions for retirement by a sinking fund if there is one.
6. Any call or redemption clause.
7. *Acceleration clause*, making the principal due and payable immediately if a default in the interest payment occurs.
8. Any privileges of bondholders such as would relate to conversion into other securities, and so on.
9. A definition of the status and duties of the trustee.

Certain legal requirements as far as the indenture is concerned are set forth in the *Trust Indenture Act of 1939*, which requires that corporations must file trust indentures with the *Securities and Exchange Commission* as part of their registration statements. However, certain securities are exempted from registration under the *Securities Act* and the indenture requirements do not apply to corporate bond issues whose total principal amount is limited to \$1,000,000 under the indenture. The *Trust Indenture Act* also sets forth that provision must be written into the indenture concerning the actions to be required of the trustee in the event of default by the corporation.

The description of the property pledged is extremely important, as it is this which specifies the property upon which the bondholders have a prior claim, and if that property is insufficient to take care of the amount of

the bonded debt, it will be necessary to take recourse against the *unpledged* assets of the corporation. The bondholder has no priority on the unpledged assets but must share with the other general creditors. Should the pledged property be sold for more than the amount of the debt, the surplus is applied to the claims of the unsecured creditors.

The debt structure of a corporation may be quite complicated in some cases. It may have a number of secured bond issues and these may have co-equal first mortgages on different properties or successive claims such as a first, second, or third mortgage on a single property; in the latter case payment will be made to each set of creditors in the order of their priority; that is, the claims of the first mortgage are to be settled first, then the second mortgage claims, and so on. When we have first mortgages on different properties, the holder must look first to the specific property pledged under his mortgage.

In the case of successive liens we sometimes find that interest payments will be made on one or more of the prior liens while default occurs on the later ranking liens. In this situation, foreclosure takes place only with regard to the secondary liens which are in default and the prior liens are left *undisturbed*. Usually a group of liens making up a fairly complex system are found mainly in the railroad field. Where such a number of liens do exist, however, we call those with a prior lien *senior* or *underlying*, and the secondary claims we call *junior* or *overlying*.

The *open-end mortgage* is a device that permits successive bond issues, all of which are secured by a single lien. The use of this device prevents the necessity for creating numerous liens to meet the requirements for borrowing capital as a business grows and expands. Under the open-end mortgage, bond issues bear a common name but are distinguished as Series A bonds, Series B bonds, and so on, and the series may differ as to interest rates and maturities.

We find many provisions whereby the power of a corporation to increase its debt is limited in order to prevent dilution of the security to a point where the strength of an issue would be threatened. These provisions are included in the indenture and commonly provide, for instance, that a public utility company shall not issue additional bonds for more than 75 per cent of the cost of future unencumbered property additions. Another type of provision relates the power to create debt with the earnings of the corporation. For instance, it might be required in a utility issue that the earnings be equal to at least twice the interest charges on existing and proposed bonds.

There are other provisions with which we should become familiar. It is suggested that the reader study the provisions pertaining to various issues themselves in offering circulars. In any event, as we shall see when

we go into the matter of security analysis, we must be fully aware of the things that add to or detract from the strength of the issue with which we are dealing. The restrictions as to property and earnings are of first-rate importance.

When a corporation by means of an open-end mortgage is allowed to expand its debt, it is proper to require that any subsequently acquired property shall be added to the original security, and this may be done by use of an *after-acquired clause*, which may permit borrowing against subsequently acquired property up to a stated percentage of its cost. This is important in that a concern might construct new plants or acquire new facilities which would render the original property of less value or even obsolete.

From the standpoint of the bondholder, such a clause is a source of strength; however, from the point of view of the corporation, *if there is a limit to the debt that may be created* under the open-end privilege, the after-acquired clause would operate to make all new property subject to the lien but might prevent their borrowing in order to finance it. If it is highly desirable to accomplish further financing, and a junior lien is impracticable, it becomes the problem of the corporation to surmount in some manner the obstacle of such an after-acquired clause.

This may be done directly in several ways. The most common method is to redeem the issue if it is callable and replace it with a new and larger issue which will provide the funds for redemption as well as for new construction.

Another method would be to exchange the old bonds for those of a new issue. However, this involves obtaining the consent of the original bondholders and will usually involve the offering of some tangible consideration in the form of increased interest or a cash bonus in order to facilitate the exchange.

A third method, which is highly cumbersome and complicated, involves modifying the indenture with the consent of the old bondholders.

A second group of solutions to this problem are indirect and avoid the actual removal of the hindering debt limitation and the after-acquired clause. They are the use of purchase-money mortgages, financing through subsidiaries, consolidation, and the use of leases.

In the case of a purchase-money mortgage, which is simply a mortgage given to the vendor as part of the purchase price of the property, we find that this mortgage, or vendor's lien, has a prior claim to any claim which the bondholders might have because of an after-acquired clause. Usually their position will not be injured, however, since they have the same security they had before, plus a claim on any value in the new property, which is over and above the purchase-money mortgage.

The solution to be found in financing through subsidiary companies may be resorted to, and when it is not specifically forbidden by the indenture, the bonds of this subsidiary may be sold to finance the acquisition or construction of the desired property.

The third solution is that of consolidation in which the corporation might dispose of its property to another, the stockholders in the old corporation receiving shares in the new one, the new company assuming the debts of the old but not being bound to submit its subsequent property additions to the restrictive effect of the former company's after-acquired clause.

Obviously, if instead of purchasing the desired property, a corporation should rent it for a period of years under a lease contract, such an arrangement might eliminate the need for financing with bonds.

There are certain things we should know about the titles which are given to mortgage bond issues. However, a knowledge of the various titles may be easily gained as a result of actual experience. The main point to be emphasized is that reliance should not be placed solely upon the bond title but reference should be made to the exact description of the lien. Certainly considerable care should be taken, since even though for the most part the titles are accurately descriptive, a certain amount of confusion is likely to arise in the mind of the beginner or unskilled investor.

COLLATERAL TRUST BONDS

We have considered mortgage bonds and found that they were secured by a pledge of real property. The *collateral trust bond*, while not used as generally as the mortgage bond, nevertheless is an important instrument, distinguished from the mortgage bond by the fact that it is secured by a pledge of *personal property*. In this case, the personal property consists of either stocks or bonds, or both, which are deposited with a trustee. They are pledged as security just as real estate is pledged and, in the event of any default upon the bonds secured in this manner, this collateral can be seized and sold.

Just as in the case of mortgage bonds, any excess resulting in the proceeds from the sale is returned to the corporation for the satisfaction of other creditors and any deficiency in the proceeds becomes a general unsecured claim on the part of the collateral trust bondholders. The instrument by which the security is pledged is actually a mortgage instrument but is referred to as a *chattel mortgage*. Certain individual collateral trust issues enjoy an excellent investment reputation. However, as a class their reputation is somewhat below that of mortgage bonds. The reason for this probably lies in the fact that the collateral trust bonds

are most frequently secured by stocks which are themselves usually junior to outstanding mortgage issues of the same company or companies.

We might emphasize at this point that one rarely hears people in practice talk about mortgages. When they discuss collateral trust obligations, and when they refer to a mortgage bond, it is assumed that they refer to bonds that are secured by real property and not to bonds secured by personal property, such as collateral trust bonds, even though a chattel mortgage is involved.

We may think of collateral trust bonds as consisting of two main types: (1) collateral trust obligations that are secured primarily by bonds; and (2) those secured primarily by stocks. Probably more often than not, when discussing collateral trust obligations, we think of bonds that are secured by stocks.

We are inclined to feel that in the case of bonds secured by stocks we have an obligation that is somewhat vulnerable because of the possibility of fluctuation both in the market value of the security and in the stream of the income which has to support the interest charges. As a practical matter, too much attention should not be given to fluctuations in the market price of the collateral.

We must learn that two things support a collateral trust bond. First, the collateral itself—that is what we can rely on if we find it necessary. But, in addition, the general credit and earning power of the corporation also stands behind the bond. It is very important to recognize this second factor and to realize that the holder's interest requirements may be met satisfactorily even though the income from the stocks which actually secure the loan is not adequate to pay the interest. In fact, it is possible that the collateral might become valueless, in which case the collateral trust bond would become a debenture or unsecured obligation and would depend for its quality entirely on the general credit of the issuing corporation.

In this connection it is appropriate to mention that in certain cases the corporation is required to deposit additional collateral with the trustee if the existing collateral falls in market value below a certain point. Whether this is required or not depends entirely upon the terms of the original bond agreement or indenture.

Any standard text will provide various and interesting illustrations of how collateral trust bonds of this type have been employed. An interesting example from our point of view is the collateral trust issue of the X Railroad, which was issued in the early part of the present century. The X Railroad wished to acquire control of the Y Railroad. The X Railroad purchased from a New York banker a block of slightly more than 50 per cent of the common stock of the Y Railroad and proceeded to issue col-

lateral trust bonds pledging the stock of the Y Railroad as collateral. Subsequently during the 1930's the market value of the railroad stock sank to a very low level and the collateral was of much less market value than the face amount of the bonds. Further, at this point the dividends shrank to zero. However, the issue did continue to pay its interest, and recently the X Railroad paid off a substantial part of this debt, partly out of earnings and partly by selling a portion of the Y Railroad stock. At the present time the value of the Y Railroad stock has risen to a substantial level and the general credit of the X line has greatly improved with the result that the collateral trust bonds are selling at a premium. In this situation we have a picture of the possibility of a collateral trust bond receiving support during a crisis from the general earnings and cash of the issuer.

In general, as to the desirability of using the collateral trust type of obligation, which has for its security fluctuating common stock, we may say that it ought to be offered only when the corporation management believes it will be able to raise enough current cash to enable it to carry the interest charges regardless of what happens to the market value of the security even in the worst times.

In the case of collateral trust issues secured by bonds, possibly the most frequent use has been to employ existing bonds of the issuing corporation. This general type of financing was employed in borrowing from the Reconstruction Finance Corporation by railroads during the darker days of the depression. Many of the roads had in their treasury bonds that they had repurchased and which were available to be pledged for borrowing purposes. While these obligations had fallen considerably in market price, they were able, by putting up a large par amount, to get adequate market value to secure their loan from the RFC.

Occasionally this type of loan has been sold to the general public. For example, let us assume that a corporation had an open-end mortgage which provided the right to issue, let us say, a million dollars worth of long-term first and refunding 4 per cent mortgage bonds, and desired to arrange some financing in a difficult bond market when bonds of long maturity were selling at a substantial discount. In such a case, the corporation might, if it felt that this was a temporary situation, make a short-term loan advantageously and use its mortgage bonds as collateral.

If the par value of the collateral which is deposited exceeds the par value of the collateral trust bonds by any substantial amount, say 50 per cent, we would feel that we had a rather strong issue since it would possess all the security of the first mortgage collateral behind it on more than a dollar-for-dollar basis.

In summary, we may say that three factors operate to determine the

credit standing of the collateral trust bond. The first, of course, is the present and the probable future value of the security pledged.

The second factor is the general credit of the issuing corporation. That is simply a question of what we consider to be the worth of a debt obligation which has no specific pledge or lien. This factor, of course, is always to be considered and in many cases it is actually of more importance than the value of the collateral, in which case the bond is rated on the basis of the stronger factor.

The third factor lies in the protection to the holder found in the terms of the indenture. Within the limits of what an indenture can do, protection may be afforded by including provisions intended to prevent displacing of the security or substitutions of inferior collateral.

Beyond the broad classification of collateral trust bonds into those secured by stocks and those secured by bonds, it is possible to go into further detail. For instance, there are the various collateral trust issues which are secured by the stocks of affiliated or subsidiary corporations which are held for purposes of control. In the case of holding companies, stocks comprise the greater bulk of assets, and when secured bonds are issued, stock collateral is the natural security. Whether it is advisable to consider the closely held stock of a controlled company in the same light as the investment security, with a wider market and greater dissemination of information, is a matter of some doubt. There is further the problem that the controlled subsidiary will have resorted to mortgage bonds as a means of meeting its financial requirements, in which case the collateral trust bonds, secured by the common stock, would have junior status.

When an operating company, however, is in the position of attempting to purchase control or only a substantial block of stock in another company, it is likely that the collateral which they put up, namely the stock which they are purchasing, would have a market record which would aid in its evaluation. The example which we used in the case of the X Railroad is illustrative of this situation. In such cases a collateral trust issue is simply a device by means of which the purchase of control or interest in another company or companies may be financed.

Probably the greatest danger where either stocks or bonds of controlled companies are employed as collateral lies in the possibility that mismanagement may permit deterioration of the properties and, if serious trouble is encountered, the collateral trust bonds are likely to hold an extremely weak position, especially as they are so frequently junior liens.

Collateral trust bonds secured by bonds have been originated for a wide variety of reasons and in the case of railroads and public utilities have been used to group small and relatively unmarketable issues of

branch lines and small operating companies into a single large bond issue.

From the standpoint of the bondholder, the chief question concerns the proper value of his lien in case of trouble. The answer to this appears to lie in the ability of the mortgaged properties to operate profitably and individually, in which case the collateral should be able to produce the necessary income to avoid defaulting upon the collateral trust bonds. If, however, the mortgaged properties are mere appendages and separate operation is impractical, such strength in adversity would not be found.

The protective provisions desirable in this situation should be designed with the object of maintaining the original quality of the security. The collateral deposited should be first mortgages, and in case any of the bonds used as collateral should default, substitutions of suitable securities should be required or an equal amount of the secured debt should be redeemed.

EQUIPMENT OBLIGATIONS

Equipment obligations are not important in total amount as compared with some other types, but since they are very well known and very highly regarded in the investment market it is necessary that we understand their character and the peculiar method in which they are issued. The customary equipment trust issue is unique and different from any other issues that we are considering.

Briefly, this is simply corporate borrowing secured by property in the form of railroad equipment or rolling stock. Originally this type of obligation was employed by railroads that were having difficulty in meeting their financial needs. As these obligations became seasoned and their great safety became known, their interest costs decreased accordingly and, finally, their use became popular by even the strongest roads.

This obligation may take several possible forms. However, the *lease*, or *Philadelphia plan*, is now generally used and is practically universal for all issues that are sold to the public. In recent years there have been some cases of borrowing from banks where the financing has been arranged privately between the bank or banks and the railroad, in which the conditional sale form of agreement has been employed. However, since we are mainly concerned with public financing that is handled by the investment banker, we may concern ourselves only with the form that has general use and acceptance.

Under the Philadelphia plan the equipment is rented to the railroad until the total rental over a period of years is sufficient to pay the principal of the "loan" as well as the "interest" (legally, a dividend). Briefly, in setting up an equipment trust under this plan, the railroad contracts with a manufacturer for a certain amount of rolling stock and puts up an

original down payment of 15 or 20 per cent as a margin of safety. When the equipment is manufactured, it is transferred to a trustee who holds the title and leases the equipment to the railroad. Equipment trust certificates are then issued to realize the remainder of the purchase price, the certificates usually being sold to the public.

From the proceeds of the rent which the trustee collects from the railroad, the holders of the certificates are paid a fixed rate of rent which we think of as interest but which, in this case, is actually a dividend since the certificate holder is actually an owner rather than a creditor. The holder of the trust certificate owns a share in a trust fund of equipment which the trustee holds for his benefit.

In addition to meeting the dividend requirements, provision is made to employ the rentals over and above those requirements in paying off a portion of the certificates each year or half year by serial retirement, the requirement being that all the certificates be redeemed over a period that is less than the normal life of the equipment.

It should be pointed out that although the equipment trust certificate holder is not in the position of a creditor, the rental under the agreement constitutes a fixed charge as far as the railroad is concerned. It is a long-term lease which has to be met as long as the railroad is solvent, and if the railroad fails to pay that rent it will be insolvent just as if it had failed to meet the interest payments on a bond, since in most cases it is customary that the railroad endorse on the certificate a guarantee that it will carry out its obligation under the lease, and thus the holder is afforded a direct claim against the road.

The typical equipment trust issue is noncallable since redemption on a serial basis is provided which is definitely advantageous to the investor who wishes to hold an investment with a definite maturity.

As far as maintenance of the rolling stock is concerned, we find that there is a rather complete series of agreements or covenants by the railroad to do all that is necessary to maintain the security in good condition, such as agreeing to keep it in repair, agreeing to insure it against loss or damage, agreeing to replace it if it is destroyed or to supply the appropriate amount of cash instead.

The general standing of equipment trust obligations is extremely high. In many cases they have been tested in reorganizations, and when such issues have been standard in every respect they have come through without compromise in almost every instance; in fact, their position may be compared favorably to that of the choicest senior liens.

There have been occasions on which industrial companies have financed the acquisition of special types of equipment in this manner. Since the equipment is usually of a specialized nature, greater precautions are usu-

ally taken to safeguard the issues in the form of shorter maturities and higher down payments.

BONDS SECURED BY CREDIT

Perhaps the most important type of bond other than the mortgage bond, which we have discussed previously, is the *debenture bond* which is an obligation not supported by any specific pledge of property. However, we must remember that while these bonds are commonly said to be unsecured they are, together with the general creditors, in a broad sense, secured by any property of the issuing corporation not otherwise pledged. Further, the interest on a debenture bond constitutes a fixed charge in every sense of that term and must be paid by the corporation in order to avoid insolvency. There is some confusion in the popular mind in regard to this point.

Practically speaking, many of the protective provisions we have already discussed in connection with other kinds of bonds and for preferred stocks may be included in the trust agreement protecting a debenture bond issue. There is, however, no specific pledge of assets involved. In the case of failure or liquidation, secured creditors enjoy a prior claim only on the specific assets pledged for their security, and if the secured creditors find it necessary to lay claim to further assets, they must share with the general creditors, including debenture bondholders if they exist.

We find that debenture bonds are used most frequently by industrial corporations, that is, manufacturing companies and merchandising companies. This in no way reflects a weak credit situation on the part of these companies simply because they issue bonds without any mortgage security. On the contrary, it may reflect a very strong credit position which enables certain companies in this category to borrow at a very low rate of interest without giving a lien.

Historically there was a time when the typical industrial corporation more often than not used a mortgage and the relatively few important cases of debenture financing were invariably the cases of extremely large, stable, and successful companies. More recently, debenture issues have been resorted to by a large number of industrial corporations as a result of their improved credit standing, their credit strength making a specific pledge of property unnecessary. On the other hand, this kind of issue has been put out by companies simply because they had little to offer in the way of security. In the latter case, some special privilege, such as convertibility or the attachment of stock purchase warrants, as well as rather high interest rates, are included in the agreement in order to make the issue attractive to investors. Obviously, the resultant bond would have speculative qualities.

The use of debentures by industrial corporations has merit in that, by financing in this manner, they leave their bank credit and mercantile credit relatively unimpaired. In other words, the banker or the merchant in dealing with a company whose assets are in no way encumbered by a mortgage is spared the possibility of having to occupy a secondary position and will extend credit with that in mind.

In the case of industrial companies, of course, current credit is extremely important, since typically they carry a relatively large amount of current assets for which short-term credit may be very useful. It is advisable, therefore, that they care for their long-term needs with a debenture issue in order to give their current creditors full assurance regarding their position.

We shall consider the matter of the various types of assets that are characteristic of other forms of business, such as the railroads and the public utilities, in another discussion. However, we may note here that railroads and public utilities have almost all of their money in fixed assets and consequently they do not require short-term credit in the way the big industrial companies do. For that reason this particular argument for the debenture is lacking in their situation. As far as these companies are concerned, we characteristically expect to find mortgage bonds, and consequently if we find a debenture also we are almost certain to conclude that the debenture is of secondary quality. While it is possible that a railroad might have so little debt that the debenture still might have a good quality, characteristically, as we have said, the rail debenture does not have as good a rating as does the mortgage issue.

We might also give our attention briefly to the use that some public utilities have made of the debenture. We sometimes find a public utility with a simple debt program consisting of one large mortgage issue of the open-end type. Should an opportunity arise in which this company can refinance with a new bond issue with a materially lower rate of interest, provided the issue is smaller than that in existence, resort can be had to refinancing with two issues, one a mortgage obligation of the superior quality which will meet the standards of conservative investors, and the other a small debenture issue consisting of the excess debt, so to speak, from the point of view of the market. Ordinarily the plan in this case is to pay off the debentures by serial maturities over a period of years out of earnings in order to cut the major debt down to the point that it meets more conservative standards.

A number of operating companies have utilized this device to effect immediate reduction in the rate of interest on their mortgage debt and are consequently engaged in paying off their debentures which, at the

present time, are regarded as attractive because the debt typically will run for only a short period of time.

Since certain institutions are anxious currently to find short-term investments, we have the interesting spectacle of utilities able to sell debenture obligations at a lower rate of interest than mortgage obligations simply because the short maturity of the former has so much advantage for these particular buyers that it offsets the slightly greater risk of occupying a secondary position.

Two other kinds of bonds have *general credit* behind them—*guaranteed obligations* and *assumed obligations*. In practice, these bonds may have a mortgage as well as general credit. The reason we discuss them here is that in so far as they are guaranteed or assumed they have a similarity to debentures. An issuing corporation may have issued a mortgage bond, and in the event that another corporation, because of a financial interest in this issuing corporation, wishes to assume the responsibility for the issue by a guarantee, these mortgage bonds as far as the guaranteeing corporation is concerned become simply a debenture obligation, the basic lien on the assets of the issuing corporation remaining undisturbed. The investment rating of such a bond is dependent upon the stronger support, whether it is the general credit of the second corporation or the lien on the property of the issuing corporation.

Guaranteed bonds may be guaranteed directly or indirectly. A direct guarantee might arise at the time an issue was being sold in the case of a holding company desiring to facilitate the sale of bonds by a subsidiary when the unguaranteed credit of the subsidiary is insufficient, or when the added credit of the holding company will result in a lower cost for the loan. In other words, a direct guarantee is a device by which the issue is made more marketable.

There are situations in which a guarantee arises subsequent to the actual issue. A typical situation of this sort is found in the case of rental arrangements whereby one railroad rents the facilities of another railroad and provision is made that the rental fee shall cover the interest on certain obligations of the corporation whose property is being rented. In that case, we typically say that the renting railroad has guaranteed the bonds of the landlord railroad. The rental charge of the operating railroad is, of course, a fixed charge, and therefore it has agreed by its renting contract to maintain the charge. A lease of this type would be considered an indirect guarantee and might involve either guarantee of interest only, or, in the event that the lease extended well beyond the maturity of the bonds and provided rental sufficient to insure both interest and principal retirement, the result would be the indirect guarantee of both principal and interest.

The *assumed bond* arises in connection with the acquisition of the properties of a debtor corporation by another corporation. The successor corporation might simply assume the debt of the corporation it is taking over as part of the terms of sale instead of paying its debts immediately, or, in the case of a foreclosure, a company might purchase the properties against which the foreclosure proceedings were being carried out subject to the claims of certain bond issues, if there are any which have been undisturbed. This is done to enable the new company to acquire and keep title to the property which has been mortgaged to secure these bonds.

Joint bonds are guaranteed obligations in which two or more guarantors have joined. The liability of the guarantors may be limited to a stated amount (joint) or it may be unlimited, in which latter case it is said to be *joint and several*. We most usually find such an obligation where a group of people or corporations desire to use a property in common. Therefore, a natural use for the joint bond would be where a group of railroads wished to use a terminal and each becomes a party to the guarantee of the bond issue used to finance the construction.

It is appropriate at this point to mention briefly the subject of *trustees' certificates* issued in bankruptcy which are most frequently found in the case of bankrupt public service corporations whose uninterrupted service is required by the public welfare. It may be noted that these trustees' certificates (formerly receivers' certificates) issued for the purpose of temporary financing have no lien, but in spite of that fact they have a special position; the reason is that the court under whose order the certificates are issued in order to operate or improve a bankrupt property has the authority to assign them a position of priority. The mortgage bondholder in many cases is willing to yield priority in order that the needed funds be provided to rehabilitate the property, to continue its operation and thus to preserve his interests in the security under the mortgage. The objective, of course, is that these certificates will be paid off by earnings.

SPECIAL TYPES OF BONDS

Three special types of bonds have features entirely different from any we have discussed heretofore. These are *convertible bonds*, *bonds with warrants*, and *income bonds*.

The nature of the convertible feature as applied to bonds has been explained in relation to preferred stocks. This feature simply offers an opportunity for the bondholder to share in the prosperity of the corporation beyond the fixed claim of the ordinary bond by means of conversion into common stock at a specified price. Bonds with this feature are usually of the weaker or at least second-grade variety, the privilege of

convertibility being included as compensation for such relative insecurity.

The use of warrants with bonds gives rise to an instrument which is somewhat similar to the convertible bond except that in this case the warrants simply give the holder the right to purchase stock in specified amounts and at specified prices. This privilege, therefore, allows the investor a possible opportunity to participate in the future prosperity of the company, and its value depends upon whether the market price of the stock will rise above the subscription price before the right expires. The main distinction between this device and the convertible bond is that when warrants are used the bondholder may be able to exercise his warrant without surrendering the bond at a time when he has a continued interest in holding it.

Income bonds have sometimes been regarded as anomalies by students of finance; yet they have a very useful purpose and it is not impossible that we shall see them used more often in the future than they have been in the past. We must note that an income bond is a bond which breaks one of the most important rules we have used to distinguish bonds from equities, namely, its interest does not constitute a fixed charge but is contingent upon earnings and may require a declaration by the board. The income may or may not be cumulative. Usually the indenture requires that an interest payment be declared, however, whenever earnings are shown.

Such bonds are usually given out in reorganizations in exchange for defaulted bonds and are particularly advantageous in satisfying the bondholder claims of regulated investment institutions which might be prohibited from holding preferred stocks. One considerable advantage of the income bond is that the interest is a deduction from the earnings of the issuer and so is prior to federal income tax. This deductibility may provide a substantial saving in this regard as compared with dividend requirements of preferred stock which are payable out of earnings after federal income tax and are not a deduction in computing taxable net income. However, under ordinary conditions such tax savings might be regarded as less important than the avoidance of excess funded debt.

Recently we have seen instances of the use of income bonds outside of reorganization situations. In one case an important meat-packing company issued an income debenture bond and shortly thereafter was able to refinance that issue by the sale of another income debenture issue at a lower interest rate. From the point of view of the purchaser of this issue the fact that the interest payments came ahead of income taxes gave a degree of safety, for the net income of the company had not been too generous in recent years. From the point of view of the corporation, the tax saving meant that there would be more left for the common stock-

holders than there would have been after paying a dividend on a corresponding preferred issue.

While there will probably always be some prejudice against the use of income bonds, there are certain advantages which might well be examined to the benefit of both corporation and investors.

BOND RETIREMENT FEATURES

Two principal methods have been developed to provide for the reduction of bonded indebtedness. They are the *sinking fund* and the *serial bond*.

A *sinking fund* is created by regularly setting aside certain sums by the corporation, ordinarily paid to the trustee of the issue, for the purposes of debt retirement either by purchasing the bonds in the market or by call. The method it uses, purchase or call, is usually optional. As long as bonds may be bought in the open market at or below the call price the company will do so. However, should the issue be selling above the call price it will obviously be advantageous to the corporation to meet the sinking fund requirements by call. In this case the bonds which are called are drawn by lot. Naturally sinking fund purchases in the open market provide a certain amount of price support which is an attractive feature as far as the holder is concerned.

There are several varieties of sinking funds. In some cases a specific amount must be contributed annually to the fund, either stated as the face amount of bonds or as dollars or as a percentage of the bonds issued. In other instances we have provision for variable annual amounts. In other words, the payments may be scaled so as to increase each year in the belief that the ability of the company to retire its debt will grow, or the payments may be scaled to decrease each year in the event that it is desirable to reduce an excess debt within the near future and carry on a more leisurely program of retirement after the debt has been brought to modest proportions. In some cases the payments are not definitely stipulated but are arranged on a basis which will permit the annual payment to fluctuate with earnings and so with ability to pay.

A *serial bond* issue is one in which some of the bonds are made to mature each year or half year instead of having the entire issue mature on a single date. Serial bond issues have been most common in the field of real estate financing and, as we have mentioned, in connection with equipment trust certificates, and in the municipal field.

If we are to compare sinking fund bonds and serial bonds we might indicate that the serial bond gives the purchaser a more certain maturity. In other words, he presumably is able to buy a bond which has exactly the maturity he wants, which satisfies the investor and is also advanta-

geous to the corporation in periods when short-term investments sell at a low yield. We might further indicate as a matter of comparison that while the operation of a sinking fund provides market support which tends to improve the marketable quality of the bonds, the serial arrangement, on the other hand, plays no direct part in the open market.

A third point is that the redemption of serial bonds takes place at par at maturity while the price at which the sinking fund bond is retired is uncertain and may require redemption at a premium or, on the other hand, allow purchase in the open market at a discount.

The fourth comparison is that the prearranged maturity program of the serial bond issue is more rigid than the flexible program which may be a feature of the sinking fund.

REVIEW QUESTIONS

1. What are the important details of a stock certificate?
2. Distinguish between the functions of a transfer agent and a registrar.
3. By what procedure are dividends declared?
4. What is meant by the term "exdividend"?
5. Is a stock certificate a negotiable instrument? Explain.
6. What agencies are employed to guarantee an endorsement on a stock certificate?
7. Define: Net worth, assets, producers' goods, stock outstanding, capital.
8. Distinguish between: Capitalization, capital structure, capitalization of income.
9. What is the significance of no-par shares of stock?
10. Why has par value lost much of its significance?
11. What is the principal advantage of a low par value over a high par value in corporate financing?
12. What are the accounting entries normally made by a corporation to reflect the following transactions:
 - (a) Issuance of one share of \$100 par common for \$100 cash?
 - (b) Issuance of one share of \$5 par common for \$100 cash?
 - (c) Issuance of one share of no-par common, stated value \$25, for \$100 cash?
13. Distinguish between preferred stock and common stock.
14. Is it mandatory for a board of directors to declare dividends on preferred stock, if earned? Explain.
15. Explain the following features of preferred stock: Cumulative, participating, convertible.
16. Give several conditions under which it would be advantageous for a holder of convertible preferred stock to exercise his conversion rights.
17. What are the protective features normally accorded preferred stocks?
18. What are the principal distinctions between bonds and stocks?
19. Outline the important advantages of bonds over stocks in corporate financing; of stocks over bonds.
20. What is a bond indenture? Describe its usual contents.
21. Distinguish between coupon bonds and registered bonds.
22. Define: Debenture, mortgage bond, collateral trust bond.

23. Discuss the importance of the Trust Indenture Act of 1939.
24. Define: Mortgage, mortgagee, mortgagor, open-end mortgage, purchase money mortgage, chattel mortgage.
25. Of what significance is an "after-acquired clause" in a mortgage? How do corporations surmount its limitations?
26. What factors determine the credit standing of collateral trust bonds?
27. What is an equipment trust certificate? Explain the "Philadelphia Plan."
28. Define: Guaranteed bonds, assumed bonds, convertible bonds, income bonds, bonds with stock purchase warrants.
29. What are the advantages and disadvantages of income bonds from the viewpoint of a corporation, from the viewpoint of an investor?
30. Discuss the merits of retiring bonded indebtedness:
 - (a) By means of a sinking fund.
 - (b) By means of serial maturities.

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PART II

Security and Investment Analysis

FINANCIAL STATEMENTS AND CORPORATE REPORTS

*by Dr. John H. Prime, Professor of Finance,
Graduate School of Business Administration,
New York University*

THE INVESTOR who holds a security holds either a bond or a stock. As a bondholder, he is a creditor. As a stockholder, he is an owner. As a bondholder he has a claim against the corporation. As a stockholder he has an interest in the corporation. The first question that arises in the mind of the investor is the question of the nature of his claim or his interest.

The nature and extent of the claim which he may have against the corporation, in the instance of the bondholder, is evidenced, of course, by the terms of the bond indenture. There we have the investment contract between the issuer and the bondholder. The nature of the interest which he may have in the corporation, in the instance of the stockholder, is evidenced by the certificate of incorporation.

The second and, in fact, more important question in the mind of the investor, concerns the value of that claim or of that interest. The only way that he can determine the value of that claim or that interest is to analyze the financial condition of the company to determine how strong the company is financially. For that reason, the analysis of a financial statement is very important. Of course, the financial statement itself is only part of the story. It is the interpretation of that financial statement that is extremely important.

What do we mean by the financial statements of a company? Simply, we mean the statements that are issued which give a report of the progress of the company during a period of time known as the *fiscal year*, and a statement of the condition of the company as of a particular date, usually the end of the fiscal year.

The fiscal year of any company may or may not coincide with the calendar year. Generally speaking, in the field of railroads, public utilities and in some industrials, the fiscal year coincides with the calendar year.

In many industrial companies, however, the fiscal year corresponds with what we call the natural business year of the concern. That is, in some industries the natural business year ends at some time other than December 31. We find that many meat packers end their fiscal year in October; that many department stores end their fiscal year on January 31. Therefore, when we make a comparison of the financial statements of such companies, we must be certain that the date of the statement to which we are referring in terms of the year is as of the fiscal year end be it March 31, January 31, or some other date. If the end of the fiscal year were January 31, 1949, for example, we would refer to it as the fiscal year ending January 31, 1949, with the understanding that the year included 11 months of 1948.

A company may issue an annual report only or it may issue also what we call interim reports. All companies, of course, issue annual reports. That annual report will generally contain the *balance sheet* and the *income statement* or *profit and loss statement*. In many instances it will contain additional operating data which is of significance to the analyst, and some information which is included primarily for the general reader.

More and more corporations have come to realize that the *annual report* may be used as a splendid medium of advertising. Therefore, it will frequently include remarks by the president, which in many cases contain information not shown directly in the financial statements. There may also be a considerable amount of pictorial material dramatizing the operations of the industry, giving to the reader a much better and clearer picture of the magnitude of the company and the problems with which it is confronted. This is not true, of course, of all reports. Some of them are still extremely abbreviated. But we have long since passed the stage where the general attitude of the corporation in putting out the annual report was "Here is the minimum of information. Now we defy you to find out anything from it."

Fortunately, that day is past. Most corporations have long since realized that it is good business and good advertising to make the report complete, interesting, and more general in its appeal. Some of these annual reports even advertise the products of the company directly by including samples of the products. For example, the reports of the Celanese Corporation and the Goodyear Tire & Rubber Company have done this.

In addition to the annual report we have had a growing tendency to issue *interim reports*. The whole trend has been toward more complete information and more frequently issued information. These interim reports in some instances are issued semiannually, but by far the more common type of interim report is the quarterly report. Railroads and public

utilities, for example, are required to issue *quarterly reports*. Many industrial companies likewise issue such reports.

Perhaps we are all familiar with the controversy the New York Stock Exchange had over this question many years ago with the Allied Chemical & Dye Corporation. It is interesting to note that the New York Stock Exchange, long before the SEC came into existence, was arguing for, and debating in favor of, more frequent reports on the part of companies whose securities were listed.

In most cases, of course, these quarterly reports are not too complete in the information they give. Nevertheless, they are helpful to the analyst because they do give him current information of the progress the company is making during the year, and a better base, therefore, upon which to judge the possible earnings from the company's operations. When a company issues only an annual report, there is no way of determining in the interim whether the prospects for the current year are good, bad, or indifferent. When, however, quarterly reports are issued, the analyst has an opportunity to make use of that current information in estimating the possible final earnings for the year.

In some instances, we also find companies issuing *monthly reports*. This is true of the railroad and public utility field, although few industrial companies issue monthly reports. The monthly report will, in many cases, simply state the net for the month together with the total net for the number of months preceding during the current year. While this information is not too voluminous it is still helpful in determining the progress of the company.

Therefore, we are faced with the question of the analysis of the financial statement as we have it before us. What is the problem with which the analyst is confronted? The question in his mind is, "Here is this financial statement. What is the meaning and the significance of the figures presented? How are they to be interpreted? What significance do they bear with respect to the earning power of this company?"

Really, the analyst is looking for two main things in that financial statement. He wants to determine, in the first place, the solvency of the company. Is it solvent? Does it have a strong working capital position? Is it able to meet its current debts, as they come due? He is interested, in the second place, in the solidity of the company, its stability, its ability to stand up and to continue to operate year after year under good, bad, and indifferent conditions.

USE OF RATIOS

In making an analysis of a financial statement, the most commonly employed tool is the *ratio*. A ratio is a relationship between two items

in the financial statement. These ratios have as their fundamental theory or principle the assumption that a relationship between these two items has some significance; that it gives us an indication of the condition of the company.

Among the ratios we employ, we have first the *balance sheet ratios*, or ratios in which we express and interpret the relationship between two items in the balance sheet; as, for example, when we compute the *current ratio*, or the *quick ratio*. In the second place, we have *income statement ratios*, or relationships between two items in the income statement; as, for example, when we compute earned income times fixed charges, or determine the ratio of net income to sales. Then, third, we have *mixed ratios*. In this case we relate an item in the balance sheet to an item in the income statement; as, for example, when we compute the relationship of the net income to the net worth.

These ratios are very helpful to the analyst. Unfortunately, however, there is no one ratio that answers all questions. As a matter of fact, we can have as many ratios as we have analyses and every analyst has his own pet ratios. Therefore, the first thing to remember when we use any ratio is that we must clearly understand the import of the particular ratio we are employing. We must be absolutely clear as to its meaning. In the second place, since no ratio is perfect, since every ratio has some element of weakness in it, we must be aware of and familiar with the limitations of the ratio. Otherwise, we will reach conclusions that cannot be substantiated.

We must emphasize the fact that ratios are not proofs. Ratios are clues. We simply check one clue against the other and by this means have a basis upon which to form a judgment. Our suspicion may be aroused as the result of a ratio, or our belief that the company is strong may be confirmed as the result of a ratio. However, that is as far as we can go in the use of ratios themselves.

Furthermore, the significance of a ratio may vary from one type of company to another. In analyzing an industrial company, we would lay particular stress upon the working capital position. In analyzing a railroad or public utility, we lay stress upon such an item, because in this case the working capital position is not of such immediate importance. By the same token, the meaning of the word *maintenance* in a railroad report involves an entirely different thing than does the use of the word *maintenance* in the analysis of a public utility or an industrial. In the case of a railroad, analysis of the maintenance charges and the maintenance policy is most important as a part of the complete analysis. Certainly it is far more important than the same item in the analysis of an industrial company.

Above all, we should keep in mind that analysis is by no means an exact science. We may collect all the data we can procure. We may compute ratios by the dozen. It is still necessary to use our own good solid judgment in interpreting those data and in evaluating the securities involved, because there are so many intangible items that we cannot put down statistically, that we cannot indicate mathematically. The data we have gathered show us what *has been* and *is now*, but when we are evaluating securities, we are trying to appraise the present value of a security in terms of its future earnings. Obviously we must use a considerable amount of judgment in arriving at that appraisal.

THE INCOME STATEMENT

We have in Table 1 a condensed and extremely simplified income statement presented in a form designed to facilitate our discussion of this particular type of statement. In the course of our discussion we shall attempt to point out the variations in form which are characteristic of the railroads, the public utilities, and the industrials.

TABLE 1
A Simplified Income Statement
(000 omitted)

Sources of total income	{ Operating	Operating revenue	\$760,491	
		Operating expenses *	651,675	
	{ Nonoperating	Operating profit	108,816	
		Nonoperating income	2,065	
		Total income	110,881	
Distribution of total income	{ Provision for Creditors	Contingencies	5,610	
		Fixed charges	1,796	
		Taxes	81,996	89,402
	{ Owners	Net income		\$ 21,479

* Including Maintenance, \$11,407; Depreciation, \$11,374.

The income statement, of course, is a *statement of the income and the charges against that income incurred during the fiscal year just closed*. It spans the period of the entire fiscal year. It is what we might call a dynamic statement. It is an evidence of the earning power of the company. It shows what the company has done in so far as earnings are concerned and is therefore some indication of what it can do in the future. And we might emphasize at this point that in making an analysis of a company it is the earning power of the company in which we are

interested. The proof of the strength of the company and the securities is in its earning power—how much and how well and how constantly it can earn. The earning power of a company is evidenced by its income statement.

As to the form in which we actually find a financial statement, let us say that in railroad and public utility reports, we have an extremely high degree of standardization and uniformity due to the fact that various regulatory bodies have prescribed the methods of setting up their accounts. For example, the Interstate Commerce Commission prescribes the form in which railroad reports must be made up. In the public utility field, the form is prescribed largely by the state public utility commissions and the Federal Power Commission. In the industrial field we have no such similarity of form in the reports, and we find considerable variation. In the case of railroads and public utilities, therefore, we can take the income statement as given and proceed to make our analysis; but in the case of industrial reports we find that in a great many cases we have to recast the income statement as issued in order to get from it the information we want and in order to achieve a standard basis of comparison.

It is important to remember that the accountant who prepares a statement works from the inside out. He takes all the ledger accounts and he makes up the trial balance adjustments; he makes his balance sheet and his income statement. But we, as analysts, start from the outside and work in. We have a statement that is handed to us by the company. It is the final product, the final report. Our task is to get underneath the surface of the report and find out what is there.

In doing that we have in mind two very important questions. First, where did the company get the income? Second, what did they do with it?

Let us note that we have indicated the answers to these two questions in the statement we are considering by the captions *Sources of total income* and *Distribution of total income*. We shall first consider the sources of income.

In general, any company has two sources of income. First, there is the income from its operations, that is, the income received for providing its main product. If the company is a railroad, it derives its revenue from furnishing transportation services. If it is a public utility, it derives its revenue from the sale of electrical energy. If it is an industrial company, it derives its income from selling the product or products it manufactures. This we call *operating income*, the income from operations.

The second source of income is from activities not directly related to its operations. We call this *nonoperating* or *other income*.

If we are to consider the operating revenue or the income from opera-

tions, we find that this section of the income statement readily divides itself into three parts: (1) the revenue received; (2) the expenses incurred to get that revenue; and (3) the balance or the net amount of revenue. The terminology here is not always the same. The railroads and public utilities generally use the term *operating revenue*, but in industrial companies, of course, the comparable term is *net sales*. Usually the company will break down the character of operating revenue or net sales, and this we find helpful, naturally, to our analysis. This subject will be discussed when we actually consider the question of analyzing the income statement. Here, for our purpose at the moment, we have operating revenue in the total of \$760,491,000.

By the *operating expenses* we mean the expenses that are incurred to obtain that operating revenue. In the instance of a railroad, these operating expenses are very clearly classified. They are classified as maintenance of way and structures, maintenance of equipment, traffic expenses, transportation expenses, miscellaneous and general. The operating expenses of a railroad are classified on the basis of the operational functions of the railroad rather than the character of the expense. For example, in an industrial company, we would include all wages in one item. In a railroad company, however, there will be allocated to the maintenance of way and structures account the amount of wages chargeable to that activity, and to the maintenance of equipment the amount of wages paid for such maintenance, and to the transportation account the amount of wages appropriate. Thus, the classification of railroad expenses is basically operational.

Maintenance of way and structures, of course, refers to the expenditure involved in maintaining roadbed, ballast, cross-ties, rails, bridges, stations, tunnels, and so forth. By maintenance of equipment is meant the maintenance of freight cars, passenger cars, and locomotives. The traffic expenses of a railroad are generally a relatively small item, because they represent the expenses in maintaining ticket offices or membership in traffic associations. However, transportation expense is a very important item, because that represents the direct expense incurred in rendering the transportation service, and we find in this account that the two chief items are wages and fuel. The miscellaneous and general account is a catch-all.

In the case of a public utility company the comparable expenses consist of the regular operating expenses, the amount spent for maintenance of properties, and the amount spent for depreciation or at least charged for depreciation. We have roughly the same arrangement in the case of an industrial company.

Ordinarily, as shown here, the operating profit would be the difference

between the amount of revenue and the expenses incurred. Let us note that we have indicated the amount of maintenance and depreciation included in the item of operating expenses in order that, when we return to this problem later to take up the question of maintenance and depreciation policies, we may have the necessary data.

However, it is of great importance that we recognize that one item of importance exists in all three types of companies, and that is the item of taxes. In the case of a railroad or a public utility, the taxes, federal, state and local, are considered to be charges against the revenue. The theory underlying this is that the rates of the companies are set by the respective commissions, and the commissions, in setting the rates that the railroad or the public utility may charge, take into consideration the taxes that it has to pay to operate. Therefore, those taxes are part of the operating expenses. On the other hand, in the case of an industrial company, the only taxes included in the operating expenses are the state and local taxes. Federal income taxes are not included in the operating expenses, because they are looked upon not as an expense, but as a distribution of earnings to the government rather than to the stockholders. Therefore, our item of taxes will be taken care of further down the line so far as the industrial type of company is concerned.

We return now to the item of operating profit in the instance of a railroad. We must compute two other deductions that appear in a railroad income statement, before we can determine the net derived from operations.

One deduction is *equipment rents*. This will appear either as a debit or a credit. Let us say that a shipment of merchandise arises on the New York Central Line and is destined for New Orleans. It is first put into a New York Central freight car, and thus begins its journey. The New York Central Railroad, which has thereby originated that traffic, will turn over that freight car to the Illinois Central to complete its trip to its destination. The merchandise is not taken out of the New York Central car and put into an Illinois Central car. It is left in that New York Central freight car, and the New York Central freight car must be shifted over to the Illinois Central. The Illinois Central, therefore, rents the New York Central freight car, and it must pay the New York Central rent for its use at the rate of \$1 per day. This rental exists until the freight car comes home to some point on the New York Central system.

Of course, by the same token, the New York Central will be using freight cars of the Illinois Central, for which it owes rental to the Illinois Central. At the end of the year they will simply strike a balance between them as to who owes whom, and the final report of the New York Central Railroad will show the net balance between the New York Central and

all other railroads with which it has business. This item of the rental of equipment and the resultant debit and credit may vary considerably from year to year because it depends upon many and changing circumstances.

A railroad like the New Haven, which originates so much traffic and passes it over to the Pennsylvania, will invariably have a sizeable amount of credit for such rental because the road that originates the traffic supplies the freight car. If it supplies its own freight car, or that of another railroad for traffic originated by it, it will receive rental for that car from any railroad over whose tracks that car passes; although, of course, the originating road must pay rental if it ships in a car not owned by itself. For example, if the New York, New Haven & Hartford were to use an Atchison, Topeka & Santa Fe freight car, it would be owing the Santa Fe one dollar per day, and at the same time would be owed one dollar per day by the Pennsylvania while that car is carrying that shipment on Pennsylvania tracks.

The other item of deduction in the case of railroads is the *joint facilities rents*. These rents occur when one railroad leases the terminal facilities of another. For example, the New York Central Railroad leases the use of a terminal to the New Haven and the New Haven pays rent for it. Now, to the New Haven that is a joint facility rent payment expense, a debit; and to the New York Central it would be income, a credit item. So, again, in the statement, we shall see the net balance at the end of the year, whether it is a debit or a credit, and that amount tends to remain relatively constant year after year. It will change somewhat, owing to the fact that generally the rental is on a use basis. In other words, charges are made on the basis of so much for each train that comes into the terminal.

Therefore, this item of net operating profit, net operating revenue, or net operating income represents the net amount of income derived from operations. This is the first source of income to the company.

We now turn to the second source of income, or the nonoperating income, which is sometimes referred to as *other income*. This, of course, is chiefly in the form of income derived in the form of dividends on stock, interest on bonds, rents for the rental of properties, or royalties on patent rights that are licensed to other companies.

The most common source of nonoperating income is the income from securities and other investments. Therefore, the amount of nonoperating income a company receives will be dependent on the character of its investments. A company that has a sizeable investment in other companies will invariably have a sizeable amount of nonoperating income of this character if those securities were purchased primarily for income. In many instances, in which the securities of other companies are purchased

more for the purpose of exercising control than for income, the amount of nonoperating income would not necessarily be consistent with the investment. In other instances, we have situations in which a railroad will buy the stocks of another railroad primarily for traffic purposes, that is, to insure the receipt of the traffic originating with the other road. Thus the source of revenue derived would be from the freight traffic rather than from any direct return on the securities it owns. Therefore, there would be no consistency between the income derived in the form of nonoperating income and the amount of investment in that stock.

Subsequently, when we discuss the analysis of income statements, we will take up the question of the distinction between recurring and non-recurring income and its significance to the investor. Here, however, for the present we may consider that the total income which the company has derived is comprised of operating and nonoperating income.

We have, therefore, the data which indicate to us where the company gets its income; how much income it receives; and what expenses it incurs to get that income. More significantly, if we have these data for a period of at least three to five years, we are in a position to measure what changes are taking place in the sources of income, in the nature of the expenses, in the amount of income, and in the amount of expenses. We are interested not alone in what the company has done during the year just closed as evidenced by its financial statement. We are also interested in what it has done in the preceding years, because our basic objective is to appraise what it is likely to do in the future on the basis of its past record. Thus, we analyze the statements over a period of years to determine the trends.

Let us consider now what the company does with the income it receives. In the distribution of that income there are two classes of recipients: the bondholders or creditors, and the stockholders or owners.

The distribution of the earnings made to the creditors is, of course, in the form of *fixed charges*. Fixed charges are fixed in the sense that the amount is definite. If we have a 3 per cent bond, there is exactly \$30 interest due on that bond. Also, the fixed charges are fixed in the sense that they must be paid. If not, there is default. Naturally, the creditors have a prior claim against the earnings.

These fixed charges will commonly include charges for the amortization of the bond discount in addition to interest on the funded debt; that is, when a bond is sold at a discount it is necessary to amortize that discount. If it is sold at a premium, it is necessary to amortize the premium.

In the case of railroads we have another very important fixed charge in the form of rent for leased lines. For example, the Delaware, Lackawanna and Western Railroad leased the Morris & Essex Railroad under

a long-term lease. It agreed to pay annual rental in the form of interest on the bonds of the Morris & Essex, the dividend on the preferred stock and payment at a specified rate on the common stock.

Again, the New York Central Railroad leased the New York and Harlem Railroad in order to gain entry into New York City. Under a long-term lease the New York Central guaranteed the payment of the interest on the bonds of the New York and Harlem and payment at a stipulated rate on the stock. Of course, in the meantime, the New York Central has acquired a very substantial part of that stock and is in the process of eliminating the New York and Harlem as a separate railroad. In the case of the Pennsylvania Railroad, we will find that the charge made for the rent for leased lines far exceeds the interest that the Pennsylvania Railroad has to pay on its own bonds.

In any event, in the case of a railroad which has leased other railroads, the rental for the leased lines is considered a fixed charge by the Interstate Commerce Commission.

The other party concerned in the matter of claims to the income is the stockholder, who receives his return in the form of *dividends*. According to the statement we presented in Table 1, the company has a total income of \$110,881,000. The bondholder creditors received \$1,796,000. However, at this point the company said in effect to the owners, "All of this is not available for distribution, because in our judgment there should be set aside for possible future contingencies the amount of \$5,610,000. We will set that aside first. Having set that aside, the balance is available for distribution."

However, before the balance can be considered as available for the stockholders we have the very important item of taxes. In this case, we have the substantial item of \$81,996,000, which is a charge against the net income after the payment of fixed charges, leaving net income available to the owners of \$21,479,000.

Let us repeat that this income statement has been greatly oversimplified and that we use it simply for the purpose of elementary description. We have, however, indicated the main divisions ordinarily found and the contents of each. Later we shall discuss the income statement in a more complete and detailed form.

THE BALANCE SHEET

The income statement gives us the story of what has happened during the past year. The balance sheet to which we now turn gives us a picture of the resulting condition of the company at the close of the fiscal year.

If we were to compare the balance sheet at the close, say, of 1944, with

SECURITY AND INVESTMENT ANALYSIS

the balance sheet at the close of 1945, we would find many changes. The explanation of those changes would be revealed in the income statement for 1945. It would explain why these changes occurred in the respective balance sheets. In other words, we might say that the income statement is a statement of cause, and the balance sheet is a statement of effect, because it gives effect at the end of the year to the operations which occurred during the year.

TABLE 2
A Simplified Balance Sheet
(000 omitted)

ASSETS			
1. Working	Current assets		\$196,222
2. Fixed	Plant and equipment, etc., at cost	190,630	
	Less reserve for depreciation	122,541	
		<hr/>	
	Net plant	68,089	
	Investments	991	69,080
		<hr/>	
3. Miscellaneous			54,869
			<hr/>
	Total assets		\$320,171
			<hr/>
LIABILITIES			
1. Current	Current liabilities		55,746
2. Fixed	Funded debt		36,090
3. Miscellaneous	Reserves	15,463	
	Miscellaneous	62,540	78,003
		<hr/>	
	Total liabilities		\$169,839
			<hr/>
4. Net worth	Capital stock *		72,232
	Earned surplus	58,713	
	Capital surplus	19,387	78,100
		<hr/>	
	Net worth		\$150,332
			<hr/>
	Total liabilities and net worth		\$320,171
			<hr/>

* Preferred stock: 612,000 shares (\$5 dividend).

Common stock: 2,059,000 shares.

We observe in Table 2 that the balance sheet as indicated might be divided into three divisions: assets, liabilities, and net worth. However, we customarily talk of the *asset side* and the *liability side* of the balance sheet.

On the *asset side* of the balance sheet we have a revelation of the forms in which the company has invested its capital. That asset side tells us two things: the forms in which the capital has been invested and the

amount in each. The *liability side* of the balance sheet reveals the sources whence the capital has been derived, and the amount from each source.

Considering first the asset side, which indicates to us the forms in which the capital has been invested, we have first the *working capital*, as evidenced by the current assets; second, we have assets that are *fixed* in form, as evidenced by plant and equipment and long-term investments; third, we have the miscellaneous and intangible assets.

By the *working capital* we mean the capital that is turning over in the business and changing form from cash into inventory into receivables and back into cash again. By *fixed capital* we mean the capital that remains relatively fixed in the form of investment. For example, if we put \$10,000 into a machine, it stays in that machine and that machine is used year in and year out. There is no turnover of that capital, except, of course, through disposal of fixed assets.

Likewise, when the General Electric Company, for example, invests in the securities of subsidiary companies, it does so not with the intention of speculating in those securities but rather for the purpose of building up a world-wide organization. It might have gone into any of the places where it owns those securities and put its funds directly in the construction of a plant, in which case that would have appeared in the plant and equipment account. It did not do that, however, and it either bought a company already in existence or it formed a separate company. Its investment was, therefore, in the securities of that subsidiary, so that this investment is just as effectively a fixed capital investment as if it had been put directly into the operation itself. This appears, we may note, as our investment account.

Then, as in all classifications, we must have a *miscellaneous*, a catch-all, so, therefore, into this third account we put the miscellaneous forms in which the capital may be invested. That, of course, would include deferred assets such as prepaid expenses, bond discount, organization expenses, and such intangibles as good will, patent rights, formulae, processes, and so forth.

We are, however, interested not only in the forms in which the capital is invested, but we are also interested in the sources of this capital, and we have indicated that the sources are revealed in the liability side of the balance sheet.

Turning to the liability side of the balance sheet presented in Table 2, we find that we have two divisions. We have the liabilities and we have the net worth. Basically, capital may be derived, first from the creditors, long term or short term. Here we have, included in the liabilities, the short-term creditors as evidenced by the current liabilities and the long-

term creditors, as evidenced by the funded debt. The second source of capital lies in the owners, as evidenced by the capital stock account and the surplus. Thus, the liability side, therefore, reveals to us the sources whence this capital has been derived, and the amount derived from the respective sources.

CURRENT ASSETS AND CURRENT LIABILITIES

By the term *current assets* we refer to those assets which are constantly changing their form, which consist commonly of cash, marketable securities, receivables, and inventory.

In the case of a railroad or a public utility, the two most important current asset items that we find in relation to the total current assets are cash and materials and supplies. By materials and supplies, in the instance of a railroad or a public utility, are meant the materials and the supplies which they carry for the purpose of maintaining the properties or of providing the service. For example, with a railroad, materials and supplies will consist largely of the supplies they need to maintain the roadbed, ballast, cross-ties, rails and the materials they need to repair the locomotives, freight cars and passenger cars. In a steam electric light and power company, the material and supplies will consist largely of coal or oil used to generate the current plus materials needed for extending and maintaining power or distribution lines.

In an industrial company statement, however, items of receivables and inventory and cash are all important. Obviously, an industrial company has to have an inventory because it sells a product, not necessarily a service. Also it has to sell on a credit basis; therefore, it has receivables. We will return to this matter when we discuss working capital.

By *current liabilities* are meant those liabilities which will fall due within one year from the date of the balance sheet. They consist largely of any notes that may be payable, any accounts that may be payable, any wages or dividends that may be payable, and taxes. If there are any bonds that will mature within the year, they also are included in current liabilities.

By *funded debt* is meant evidences of debt that mature after one year—in contrast, we note, with the current liabilities or those that mature within one year. Funded debt, of course, is represented primarily by bonds. We say that it is funded because it is usually a debt that has been changed in form so that it is represented by securities. Let us suppose that a corporation has outstanding notes payable to the banks as a current liability. It puts out a bond issue and out of the proceeds of the bond issue, due in 15 years, we shall say, it pays off these notes payable. That debt, therefore, is taken out of the current liabilities and put into

the fixed liabilities. It has been funded and has become a funded debt. It is now represented by a security, a bond, rather than by a short-term note.

In the case of a railroad, the funded debt account will, in many cases, consist of various types of obligations. As we well know, the railroads have outstanding mortgage bonds of all kinds, collateral trust bonds, debenture bonds, equipment trust obligations, bonds of the parent road, and bonds of subsidiary roads. If we look at the annual report of the Chesapeake & Ohio Railroad, for example, we will find that the statement of the funded debt will occupy practically an entire page, because it includes bonds of so many types.

SURPLUS AND RESERVES

Basically, the surplus represents the excess of the total assets over the total liabilities and capital stock. Referring to Table 2, we have \$320,171,000 of assets. We owe to our creditors \$169,839,000 and the stockholders have contributed \$72,232,000 through capital stock. In elementary terms, if we were to total these two items we would not get \$320,171,000, and we would not have a balanced sheet. It would be out of balance. In order, therefore, to balance the statement, we put in an item known as *surplus*, and that surplus of \$78,100,000 does bring the balance sheet into balance.

Thus, we might say that the surplus is the item that makes the balance sheet a balanced sheet. Also, let us note that the net worth minus the capital stock gives us the surplus. In other words, it is the excess of the net worth over the capital stock. What we want to know, however, is what is meant by surplus. It must come from some place. From what has it been derived?

Surplus may be divided into two classes. We have *earned surplus*, and we have *capital surplus*.

By earned surplus we mean the surplus that has been derived from earnings. In other words, the corporation in previous years has had earnings all of which have not been distributed to the stockholders. The undistributed earnings, therefore, have been retained in the business. This we call *earned surplus*.

On the other hand, we have capital surplus, and we might say that in general capital surplus is derived from sources other than earnings. But that is a very broad statement, and certainly not very concrete. What are these other sources from which capital surplus may be derived? Capital surplus is created when a company sells its stock for more than its stated or par value. Thus, if a company sells stock with a stated value of \$40 for \$60 per share, the assets will be increased by \$60 for each share

sold. However, on the liability side, the capital stock account will be increased by only \$40 for each share sold. The difference of \$20 will go into what we call *capital surplus*. Capital surplus is also derived from the purchase of assets for less than their book value. For example, if a company bought the assets of another company and paid, we shall say, \$800,000 in stock for those assets that had a book value of \$1,000,000, it might bring them into the asset side of the balance sheet at the book value of \$1,000,000, the balance of \$200,000 becoming capital surplus. Further, a corporation may write up the value of its assets and the amount of the write-up is put into the capital surplus account. Thus, we see that capital surplus comes from all kinds of sources other than earnings.

The use to which a surplus may be put depends upon the character of that surplus. Earned surplus may be used to absorb losses. It may be used to pay dividends or it may be used to set up reserves. However, the use of capital surplus is really basically restricted to a transfer to the capital stock account, because it represents capital originally put in, which was withheld from the capital stock account.

At the end of the year, the company in its income statement, as we see in Table 1, has shown a net income of \$21,479,000. The company began the year with a surplus. But usually at the end of the year certain surplus adjustments must be made, and they primarily apply to earned surplus. Two general types of adjustments may be made: (1) loss, nonloss, or gain items, and (2) adjustments applicable to prior periods.

TABLE 3
A Statement of Earned Surplus Adjustments
(000 omitted)

Earned surplus, beginning of period		\$ 44,427
Net income for period		21,479
		\$ 65,906
Less: Dividends on preferred stock	3,080	
Dividends on common stock	4,113	7,193
Earned surplus, end of period		\$ 58,713

For example, in Table 3 we may note that this company began the year with an earned surplus of \$44,427,000. It had surplus earnings or net income for the year of \$21,479,000. Its surplus, therefore, was increased to \$65,906,000. By virtue of a resolution by the directors, dividends were paid on the preferred and on the common stocks in the amount of \$7,193,000. The payment of such dividends is not a loss to the company, since it is a distribution to the stockholders of that which belongs to them.

Hence, it is entered there as a surplus adjustment, leaving earned surplus at the end of the period of \$58,713,000. In the event that the company had decided to set up some reserves for one reason or another, the adjustment would be made here. The setting up of such reserves does not represent a loss. The funds are still there; they have simply changed their habitat. They are in one account as against the other. These are non-loss or gain items.

The second type of adjustment that is made is the adjustment that is applicable to prior periods. Let us say that this is the 1945 report. In 1943, the company estimated its tax liability and it charged the earnings of 1943 with that estimated amount. Now, in 1945, the federal government finally determines the tax liability of the company, which exceeds the provision made in 1943, with the result that there is, perhaps, a \$500,000 deficiency in that appropriation. It is not logical or fair to charge that \$500,000 to the earnings of 1945. That charge should have been made back in 1943. Hence, we make the adjustment for it not against the earnings for 1945, but against the surplus. The same would be true if we had underestimated a depreciation reserve. By the same token, if we had overestimated our tax liability in 1943, and had provided and charged 1943 with more than we needed, more than should have been charged, that would now come into surplus. It would be an addition to surplus, but an adjustment applicable to a prior year.

Thus, we have two kinds of adjustments, those that are nonloss or gain items applicable to the current period, and those that are applicable to a prior period. Of course, in addition to nonloss or gain adjustments, if the operation of the company in any given year should result in an actual loss, that loss would be charged against the earned surplus which had been accumulated through profitable operation in prior years.

RESERVES

If we refer to Table 2 we will observe an item called *reserves* of \$15,-463,000, which appears among the liabilities.

Suppose for a moment that this item of reserves of \$15,463,000 were not in the statement. Then, of course, the statement of liabilities would have been less than it is. With the total assets remaining the same, \$320,171,000, but the total liabilities having been reduced by \$15,463,000, the surplus account as a result would be increased \$15,463,000. Therefore, the existence of that reserve or the absence of that reserve is reflected in the surplus. In this case, we took \$15,463,000 out of surplus and set it up in another account, calling it *reserves*. A reserve, therefore, is an allocation of part of the surplus on the books into another account. There is no extraction of cash, securities, or properties. It is an alloca-

tion on the books of part of the surplus for a specific purpose.

There are three classes of reserves, *valuation reserves*, *liability reserves*, and *surplus reserves*.

By a *valuation reserve* we mean a reserve which makes provision for the loss in value of a depreciable asset. Referring to Table 2 we find that plant and equipment is stated at a value of \$68,089,000, which represents the current value of the assets on the books. Originally, however, the plant and equipment cost \$190,630,000, and in the interim we have set up a reserve each year to provide for the loss in value of that asset, a loss which occurs because of wear and tear and obsolescence. At the moment we have estimated a loss in value of \$122,541,000. Therefore, the present value of that asset is not \$190,630,000—the cost—but is \$68,089,000. This reserve for depreciation, therefore, is a valuation reserve; it provides for the loss in value of an asset.

By a *liability reserve* we mean a reserve which provides for a known liability. We know we shall have to pay federal income taxes, and in some cases foreign taxes. Furthermore, we have some basis upon which to make an approximation of the amount that we shall owe. We make provision for this liability by setting up an item called *provision for United States taxes* and include it in our current liabilities. We shall discuss the actual mechanics of such a procedure later on; however, the point here is that by means of a liability reserve we set aside part of the surplus on the books to meet a known liability, the amount of which can be determined. Thus, reserves for taxes, reserves for insurance, or reserves for any pension payments that we know will come due constitute what are known as liability reserves.

Surplus reserves represent an allocation by the management of part of surplus for some unknown or undeterminable contingency. This reserve is set up in order to make some provision for any contingency which may arise. An important point to note in connection with surplus reserves is that such reserves may be returned to surplus.

A valuation reserve provides for a loss in value that has been sustained. A liability reserve provides for a liability, the existence of which is known. When we set up a surplus reserve, the contingency for which it provides may never occur; therefore, it can be drawn back into the surplus again at any time. In the case of valuation and liability reserves, we have lost something through loss in value or through taxes we must pay or for some other actual liability. In the surplus reserve, we have given nothing away and no loss or expense is involved. If our surplus reserves prove too large or if we do not need them, we can return them to the surplus account. As a matter of fact, International Harvester did

that in a recent report. It had surplus reserves which it no longer needed, so it brought them back into surplus again.

From the standpoint of analysis, a valuation reserve or reserve for depreciation is an estimate as to how much an asset has depreciated. Likewise, a liability reserve set up to provide for tax liability is an estimate—it may be too much or too little. To the extent that the company overestimates the depreciation or overestimates the liabilities, or does both, it understates the earnings; and to the extent that it underestimates depreciation or underestimates the liabilities, it overstates the earnings. Therefore, to the analyst, the adequacy or inadequacy of the depreciation reserve and the adequacy or the inadequacy of liability reserves, naturally, is important as they affect not alone the balance sheet valuation, but the earning statement as well. If a company understates the depreciation charge, it understates the operating expenses and overstates the earnings. By the same token it overstates the value of those assets on the asset side of the balance sheet.

WORKING CAPITAL POSITION

The analysis of the working capital position of a railroad or public utility is not particularly important. Railroads operate more or less on a cash basis.

Of course, the same thing is true of public utilities. They sell more or less on a cash basis. They are not faced with any particular problem of receivables. If the bill of the consumer of a public utility should run for any short period of time unpaid, the public utility has the right to discontinue service, and, in fact, in some states under the regulation of public utilities commissions, it is obliged to discontinue the service. They, therefore, have no problem of financing receivables.

Furthermore, the railroad and the public utility provide a service, not a product. Therefore, they have no great problem of financing inventory nor do they have the danger of rapid and drastic decline in inventory values. A railroad or a public utility, should it run short of cash, is always in a position to augment its cash by the sale of its obligations. If its current obligations cannot readily be met, it is the usual practice, and without great difficulty, to float a bond issue and pay off the current indebtedness with the proceeds of the bond issue. Hence, the analysis of the working capital position of a railroad or public utility is relatively unimportant compared with the analysis of the working capital position of an industrial company.

An industrial company does have the problem of selling on a credit basis, and therefore of financing receivables. It does have the problem of financing inventory, and it is not always in a position readily to meet

the current debt through the flotation of long-term obligations. At this point, therefore, our attention will be directed primarily to the analysis of the working capital position of an industrial company. We may recall that we earlier made the point that the analyst is interested in the solvency and in the solidity of the company. We are now concerned with the question of the solvency of the company.

What do we mean by *solvency*? We mean that the company is able to meet its current debts as they come due. There is some slight distinction between technical insolvency and actual insolvency, but we might disregard such technical distinctions and point out that a company is insolvent when it is unable to meet its currently due debt. That is why the company needs working capital. We have noted that the forms in which the capital of the company may be invested are in working capital and fixed capital. The main purpose of working capital is to satisfy all the debts that are currently due.

This raises the question of where the company gets this working capital. There are many sources. First, it may obtain working capital through the sale of stock. We will perhaps recall that Sears, Roebuck & Company has from time to time sold additional shares of common stock for the purpose of financing its increased working capital needs.

Second, it may obtain working capital by the retention of profits. Instead of paying out all the earnings in dividends, it may retain part or all of those profits to be used as working capital.

Third, a company may get its working capital by short-term borrowing. It may borrow money from the banks, as represented by notes payable. It may in reality obtain working capital by buying merchandise inventory on credit, since it is not obliged to make payment for it until the due date. In the meantime, this is comparable to borrowing capital or obtaining capital to pay for that inventory.

Fourth, it may obtain working capital by long-term borrowing, that is by issuing bonds.

If there is one factor that is the most common cause for the insolvency of companies, it is the inadequacy of working capital. Companies fail not so much because they have inadequate capital as because they have inadequate working capital. Westinghouse Electric & Manufacturing Company was reorganized twice, not because it had insufficient capital or insufficient assets, but because it had an insufficient amount of its capital in working capital form. It had too much in the fixed capital form.

There are two main causes for a company's being in a position of having inadequate working capital. The first is the depletion of the working capital; that is, a company might pay out more in dividends than it should, with the result that it depletes its cash and its liquid work-

ing capital. Or, a company might transfer part of its working capital into fixed capital, and therefore deplete its working capital. For example, let us consider a company such as International Business Machines, whose basic line of products consists of electrically operated machines, these machines being leased, not sold. If they were sold, a sale would result in a receivable, and finally in cash. The fact that they are leased means that the working capital that went into the production of those machines is still tied up in them and the company moves that item from inventory up to the fixed asset account in the balance sheet. If that process were continued, the company would soon deplete its working capital. That is why we find that the dividend policy of International Business Machines is very closely related to this feature of its operations.

The other general reason that a company may have inadequate working capital is that there is an inadequate growth in the working capital in relation to its working capital needs. A company whose volume of sales is increasing must, of necessity, increase the working capital it has, and if it fails to increase that working capital as the volume of sales increases it soon finds itself with inadequate working capital to handle its increased sales volume. It is interesting in this connection to note the experience of Sears, Roebuck and Montgomery Ward in 1935, 1936, 1937, and 1938, when they were faced with increased volume of sales. We will recall that they issued additional shares of stock to raise that working capital. If they had failed to provide an increase in the working capital, they would have been seriously handicapped in financing the increased volume of sales.

Inadequacy of working capital, then, comes about because of a decrease in the working capital or a failure to provide adequate working capital for an expanding company.

The question arises, if a company has inadequate working capital for one reason or another, what remedies are open to rectify the situation?

One way to rectify it is to bring new funds into the business from any one of the sources we have mentioned; by borrowing or by selling additional shares of stock. The alternative is to reduce the current debt. Sometimes that is done by funding the current debt. This method is illustrated by the experience of the American Tobacco Company when it tried for a long period of time to finance an increased volume of inventory by bank loans. It simply postponed the inevitable step and finally had to take that step, namely to borrow \$200,000,000 through the sale of bonds to pay off the bank loans and to finance the inventory. Of these two methods, bringing new funds into the business or reducing the current debt, the first is the more commonly employed method, namely, to

bring new funds into the business, largely through the sale of additional shares of stock.

The term *working capital position of a company* relates to its ability to meet the currently due debt. In terms of the balance sheet, therefore, the determination of this ability involves consideration of the current assets on the asset side of the balance sheet and current liabilities on the liability side of the balance sheet. We have in Table 4 a schedule of current assets and current liabilities in rather detailed form giving us the data that we need in order to analyze the working capital position.

TABLE 4
A Detailed Statement of Current-Assets and Current-Liabilities
Items Shown in Table 2
(000 omitted)

CURRENT ASSETS		
Cash		\$ 27,336
Marketable securities		2,260
Receivables	\$74,914	
Less: Reserve for bad debts	4,261	70,683
	<hr/>	
Inventories		95,943
		<hr/>
Total current assets		\$196,222
		<hr/>
CURRENT LIABILITIES		
Accounts payable		28,276
Accrued U. S. taxes	78,924	
Less: U. S. treasury notes	56,411	22,513
	<hr/>	
Accrued foreign taxes	5,560	
Less: British tax certificates	2,013	3,547
	<hr/>	
Bonds payable within one year		1,410
		<hr/>
Total current liabilities		\$ 55,746
		<hr/>

What do we mean by the working capital position of a company? What do we mean by its working capital? From an academic point of view we sometimes find this distinction made: that the current assets represent the working capital. This is in line with our previous discussion in which we indicated that the current assets represented capital invested in a working capital form. Further, the term *net working capital* is used in conjunction with the term *working capital* to mean the excess of the current assets over the current liabilities. For practical purposes, when we use the term *working capital position*, we mean the excess of the current assets over the current liabilities or net working capital.

As shown in the figures in Table 4 the company has current assets of \$196,222,000 and total current liabilities of \$55,746,000. In other words, the current assets exceed the current liabilities by approximately \$140,000,000. This we call the *net working capital*, or *working capital position*.

The working capital is turning over in the business. As we have mentioned, working capital goes through a cycle. It changes form. We have cash, which goes into inventory. The inventory is sold, and it is then represented on the books by receivables. The receivables are liquidated, and we have cash, which goes back into inventory. Thus, we have a continual turning over of the working capital, a changing of the form in which it exists. We must note, however, that the common end in that circulation of working capital is toward cash.

Obviously, the more rapidly the working capital can turn over, the more productive that capital is in the amount of work it may do in supplying the necessary working capital. We measure the productivity of that working capital by the *working capital turnover*. That working capital turnover is measured as a relationship between working capital and net sales or operating revenue, and is calculated by dividing net sales by working capital. We had net sales or operating revenue indicated in Table 1 of \$760,491,000; working capital, as shown above, of \$196,222,000. In other words, that working capital has turned over approximately four times. Naturally, the rapidity with which the working capital turns over reflects favorably or unfavorably upon the character of the management.

THE CURRENT RATIO

We have seen that the net working capital is the excess of the current assets over the current liabilities, and amounts to approximately \$140,000,000. What does that mean? Does it mean that this company has a strong working capital position? Does it mean that this company has a weak working capital position?

The mere figure of \$140,000,000 does not mean very much. Whenever we measure anything and say that it is large or it is small, we mean with reference to some standards that is set up. If we simply take the figure of \$140,000,000, there is no standard by which to measure its adequacy.

In order, therefore, to determine the working capital position from the standpoint of its adequacy, we must have a standard, and the standard that we employ is the relationship between the current assets and the current liabilities. The adequacy of those current assets of \$196,222,000 depends upon the current liabilities which they may be called upon to satisfy, and it is only by comparing the current assets of \$196,222,000

with the current liabilities of \$55,746,000 that we can determine the adequacy or inadequacy of the working capital position. Therefore, the better method of measurement is the *current ratio*, or the relationship between current assets and current liabilities.

If we calculate the ratio of current assets of \$196,222,000 to current liabilities of \$55,746,000, a ratio of 3.5 to 1, that current ratio more clearly indicates the adequacy of the working capital than does the mere number of dollars, because it shows that current assets could satisfy the current liabilities three and one-half times. It is a much more significant indication.

We might well raise the question of what minimum ratio we ought to have. The usual standard taken is two to one as the minimum ratio. The theory underlying that minimum is that the owners of the business ought to contribute as much of the working capital as the current creditors. Suppose that the current assets are \$1,000,000 and the current liabilities are \$500,000. That means that the company has \$1,000,000 of current assets, of which the current creditors have supplied half and the owners have supplied the other half. If, of that \$1,000,000 of working capital in current assets, the current creditors had supplied \$750,000 and the owners \$250,000, then the current creditors would have been supplying a much greater part of the working capital than the owners.

Therefore, if we say that our company has a current ratio of three and one-half to one, meaning that the current assets could satisfy the current liabilities three and one-half times, we might feel that this compares favorably to the minimum of two to one. However, we cannot compare it to that minimum of two to one. All we can say is that a company ought to have *at least* a two to one ratio. If the ratio of the company exceeds two to one, we can determine whether or not that ratio is satisfactory only by comparing it to the average current ratio for that industry.

There is no such thing as one standard current ratio for all industries, because each industry has certain distinct peculiarities. We will find an industry like the tobacco industry in the cigarette division, which will have a large current ratio largely because it has a large amount of inventory. This does not mean that because it has a large ratio it is in a stronger position than certain dairy companies, because there are entirely different conditions in those two industries. Therefore, the only criterion we can set up by which to judge the current ratio of the company under analysis on a comparative basis is the average current ratio for the industry.

Adequate analysis, however, requires more than a calculation and

comparison with the standard current ratio for the industry. This is true because the current ratio as such is based on the assumption that on the liability side we have current liabilities, debts that must be paid; and on the asset side we have current assets with which to meet those current liabilities. It is necessary to determine in some manner the actual worth of those current assets and their ability to satisfy current liabilities.

The current liabilities are definite in amount. There are notes payable, accounts payable, and accruals. There are accounts payable in this case of \$28,276,000—a definite amount. Likewise, the taxes for which the company is liable of approximately \$26,000,000 represent a definite amount. There are bonds payable within one year of \$1,410,000, and so forth. Briefly, the total current liabilities of \$55,746,000 represent a figure which under normal circumstances is definite and which cannot be compromised.

When we turn to the current assets side of the balance sheet, however, we have cash of \$27,336,000 which cannot be disputed. Marketable securities are shown to be \$2,260,000 at current market values. We have net receivables of \$70,683,000, but this is an estimated figure since it is based on a hope that it will be received. We also have inventories valued at \$95,943,000 on the basis of market or cost, whichever is lower.

In order to meet the current liabilities, the current assets must be turned into cash. It is assumed that the receivables will be liquidated and will become cash. It is assumed that the inventory will be sold and will ultimately become cash. We cannot rightfully and safely, however, assume that these figures represent the amount of cash that will be obtained. The current ratio assumes that these current assets could be turned into cash, and that \$196,222,000 would be realized with which to meet the current liabilities of \$55,746,000, but that assumption is basically false. If this company were called upon to liquidate those inventories to raise the cash necessary to pay the current liabilities it is very reasonable to expect that the amount realized would be substantially less than the amount shown. Likewise, the amount realized from the receivables would undoubtedly shrink.

We might say that the current liabilities represent nonshrinkable dollars; that there is \$55,746,000 of debt. On the other hand, we might say that the assets represent shrinkable dollars; that, in the actual liquidation of these current assets, there is no assurance that \$196,222,000 will be realized. Therefore, the strength of our ratio of three and one-half to one depends primarily on the liquidity of the current assets. We will discuss the matter of liquidity when we examine the nature of current assets.

CURRENT LIABILITIES

In reviewing the items which commonly appear in the current liabilities, we have *accounts payable*, which represent the amounts due to trade creditors largely for the purchase of inventory; *notes payable*, which may represent notes payable to banks or possibly notes payable to creditors; *accrued expenses*, that is the expenses which are due, which have been incurred, but which have not yet been paid; and *dividends payable*. When a dividend is declared by the board of directors, it becomes an obligation of the corporation and is a claim of the stockholders against the corporation; and, in the event that any corporation is obliged to liquidate before the payment of that dividend, the dividend, if declared, is a valid claim.

Another current liability item which we will frequently encounter is *deferred income*, by which we mean *unearned income*. In other words, the company has received payments before it has rendered the service for the payments. The income has not yet been earned, and therefore the company is liable for it. Finally, we have the currently due *funded debt*, as we previously indicated, and the provision for federal taxes.

Let us consider briefly the matter of accrued taxes which, in the case of the company whose affairs are portrayed in Table 4, amount to \$78,924,000, offset by United States Treasury notes of \$56,411,000. American corporations, in anticipation of their federal tax liability, have in many cases purchased these Treasury tax notes, which may be used in the payment of taxes. There are two ways in which the company may report these notes. One is to report them on the asset side among the current assets. If this were done, the United States Treasury notes would appear on the current assets side as a current asset of \$56,411,000, and on the liability side there would be \$78,924,000 of taxes. The other method, and the one employed here, is to show the Treasury notes as a deduction or an offset from the taxes outstanding, or taxes that will be due.

It would seem that the method shown here is the more logical. After all, the current liabilities look to those current assets, regardless of their form, as a means of satisfying the debt. No matter which one of the current liabilities comes due first, the payment for it must come out of current assets. It makes no difference, so far as the current liability is concerned, whether the payment comes out of cash or liquidation of marketable securities, of receivables or of inventory. However, if these Treasury notes are shown on the asset side, they are not basically available for the satisfaction of any and all kinds of current liabilities. They are definitely ear-marked for one type of liability, namely, taxes. Therefore, the other current liabilities cannot readily look to the Treasury tax notes for the satisfaction of their claims. That is why it would seem

much more logical to show these notes on the liability side as an offset to the accrued taxes, because it means rather clearly that there are accrued taxes of \$78,924,000, for which provision had been made to the extent of \$56,411,000, and a balance of \$22,513,000 for which further provision must be made. Those who are making up the statement for the purpose of applying for credit in one form or another have commonly put such tax notes on the asset side because such a procedure increases the statement of total current assets. On the other hand, from the standpoint of analysis we are trying to get at the basic working capital position. The more conservative practice is to show them only on the liability side as an offset or deduction.

CURRENT ASSETS

We have noted that the strength of the current ratio will be indicated in the final analysis by the liquidity of the *current assets*. So far as the working capital position is concerned, it is not alone the total amount of current assets available, but the amount of those assets which are realizable and therefore available for paying the current liabilities, that is important. The basic question, of course, is how liquid are the current assets? How easily can they be turned into cash? Let us now, therefore, take each of these current assets in turn and examine them from the standpoint of their liquidity.

Of course there is no question about the cash. Obviously it is available and liquid.

In considering the *marketable securities* we must remember that a corporation may have two kinds of investments in securities. It may have long-term investments, wherein it buys these securities largely for income or for control. Such an investment is comparable to a fixed capital investment and is shown in the investment account. On the other hand, it may invest in marketable securities which consist of those securities that are bought on a temporary basis. They are not permanently purchased or purchased for a permanent purpose. For that reason we generally find that these marketable securities have three outstanding characteristics. In the first place, they are short-term investments. In the second place, they are securities which are characterized by relative stability in price. In the third place, they are readily marketable.

We find in analyzing the contents of this account in most reports that the marketable securities will consist of United States government, state, and municipal bonds—obligations which are of short-term duration or readily marketable and characterized by relative stability in price. The funds devoted to investment in marketable securities represent the excess cash which is not needed at the moment in financing inventory or receiv-

ables, and which the company, therefore, wishes to put to work temporarily in such a form that, if the need arises for additional working capital, the funds invested in these securities may be readily released and thus made available.

The question of the rate of income from such investments is of relatively minor importance. The company is willing to accept a low rate of return because of the high degree of marketability and liquidity which it obtains. The investment objective is to gain some income rather than none, with no sacrifice of liquidity.

Obviously, these marketable securities should be stated in the balance sheet at the lower of market value or cost, although it is quite customary to indicate market value parenthetically if it is in excess of cost.

Giving our attention now to the third item included in current assets, namely receivables, we observe that, in setting up the current assets, it is customary to show first cash, then marketable securities (if any), receivables, and inventory in that order. That order is based upon the degree of liquidity. In that way we show the most liquid current asset first and the least liquid last.

We might, however, make a distinction between cash and marketable securities on the one hand and receivables on the other. The amount of cash is definite and the value placed there for the marketable securities is reasonably definite, because we have the current market prices as evidence of the market appraisal. Because of the character of these marketable securities, there is not too great a possibility of the realizable value being much less than the amount shown. In setting up the receivables, however, we have an entirely different premise, because there we are faced with a valuation which is purely a matter of opinion.

It is true that there is owing to this company \$74,944,000 in receivables, but the more important question is how much of that will be realized in the formal conversion of those receivables into cash. The problem of determining how much will be realized is based on a determination or estimate of how much will not be realized. That is why we have receivables of \$74,944,000, and then recognition given to the fact that all of that amount may not be collected by setting up a reserve for bad debts. This reserve for bad debts is, of course, a valuation reserve, because it seeks to place a true valuation on the amount of the receivables.

The next question that we might raise would concern the kinds of items that appear in the receivables and their significance.

The receivables may consist of *accounts receivable*, which represent the sale of merchandise by this company on open book account for which the customers, therefore, owe the company. We call these trade receivables *trade accounts*. The amount of such accounts receivable will depend

largely upon the character of the industry and upon the credit policy of the management. In an industry like the chain variety stores such as Woolworth, selling is done on a cash basis. Obviously, accounts receivable are relatively unimportant in the balance sheet of such companies. The companies that sell on a long-term credit basis will have a large amount of receivables. Thus, we have variations in the amount of accounts receivable, based largely upon the variations in the character of the companies.

In addition to accounts receivable, the receivables may include *notes receivable*. Where such is the case, further consideration by the analyst is required. He would like to know whence these notes receivable came. It is important that he know whether they have arisen as a result of over-due accounts receivable or as a matter of trade practice. In other words, when a company has accounts receivable which are slow or uncollectible, it then usually insists upon the customer giving his note. Thus, the receivable changes in character from an account receivable to a note receivable. While it is true that the company is now in a better position with respect to that debt in that it has an evidence of it in the form of a note as against an open book account, it nevertheless reflects unfavorably upon this company, because it means it has given credit on too liberal a basis and therefore has assumed too much in the way of risk. Further, it means that whereas normally the account receivable would have been liquidated by the end of the normal credit period, and the working capital freed to be used again in the financing of inventory or other receivables, it has been necessary to turn that account receivable into a note receivable and tie up that amount of working capital for an abnormally long period of time. Therefore, it is not available for other working capital uses and obligates the company to look elsewhere for the additional working capital needed to replace that which has been tied up.

On the other hand, if this receivable item contains notes receivable, it may be due to the fact that it is the normal credit practice in that industry, and therefore nothing to be particularly concerned about. In the jewelry industry, for example, it is the common practice to give notes. When we turn to an industry like the agricultural machinery industry, we find there a sizable amount of receivables in the form of notes of dealers, simply because long-term credit is an essential feature in financing the sale of agricultural machinery.

Most commonly, the reserve for doubtful accounts and notes is set up for doubtful accounts rather than for accounts and notes. However, in many reports we shall find that this caption is used for doubtful accounts and notes with no distinction as to which part of the reserve applies to

the accounts and which part applies to the notes. We should assume that in most cases it applies primarily to the accounts.

Recalling the fact that one significant feature of valuation reserves is that they are basically estimates, let us consider the item in Table 4 of *reserve for bad debts* in the amount of \$4,261,000. Here the company estimates a loss in value and for that reason has set up a reserve. The charge which it has made during this year for such bad debts was added to the reserve already set up, and we have, therefore, the present reserve.

That reserve for bad debts has two significant features. First, it is an attempt properly to estimate the amount which probably will be collected from these receivables. If a company underestimates the bad debts, it therefore will overstate the amount which it estimates it will receive from the receivables, and to that extent we note that our current ratio will be distorted. It will present too optimistic a picture and overstate the amount which will be realized and available to meet the current liabilities. Second, the charge that is made for bad debts against the current year's income basically is made for the purpose of properly stating the income for that year since, if the loss in bad debts is underestimated, the income for the year will clearly be overstated. The reserve for bad debts is an attempt properly to appraise the realizable value of the receivables so far as the balance sheet is concerned, and to achieve a proper statement of income so far as the income statement is concerned.

The analyst is faced with the problem of analyzing the receivables account in order to determine the position of the company. In this discussion we are using data for one year in the interest of simplicity and we must realize that to make any proper analysis we require data for at least a three-year and preferably for a five-year period. Our task in making the analysis is to determine the trend and to account for the changes. For our purposes let us simply take this year's figures and interpret them relative to an increase or a decrease against last year.

The first approach to an analysis of the receivables is the ratio of receivables to total current assets. We would compare the current year's ratio with that of last year. If the percentage this year is greater than last year, of course, it indicates that the working capital in the form of receivables is representing an increasing percentage of the total working capital, the working capital is becoming less liquid. Or, if it is a smaller percentage, it is clear that a smaller percentage of working capital is in receivables. That ratio is not too important in itself. The size of the ratio will vary from one industry to another. There is no standard. We cannot say that receivables ought not to exceed a certain percentage of total current assets, because we will find it high in some industries and

low in others. We will find it high in the agricultural machinery industry and low in the chain variety store industry.

What we do consider to be of great importance, however, is the liquidity of the current ratio as affected by these receivables. A company may show a rise in its current ratio from three to one to five to one. We might well conclude, then, that the company is in a stronger position; and yet actually it may be in a weaker position, weaker because the working capital position is less liquid this year than it was last year.

We have two methods of measuring the relationship between the receivables and the liquidity of the current ratio.

The first is the ratio of receivables to operating revenue or net sales. Here we have net receivables of \$70,683,000 and operating revenue or net sales of \$760,491,000, or 9.2 per cent of the net sales. Of and by itself that does not mean very much, but if last year we had receivables of 7 per cent and now have them of 9 per cent, it would mean that the receivables in relation to the net sales have increased. This might imply that the company has a poor collection system or that it has followed too liberal a credit policy and has been taking undue risks. It is facing the danger of freezing its working capital in receivables, in slow accounts that might ultimately be uncollectible. An increase, therefore, in the ratio of receivables to net sales warrants consideration of how old these receivables are and an evaluation of the company's credit policy.

We have no objection to an increase in receivables if that increase is proportionate to the increase in net sales. Obviously, if a company has a greater volume of sales, it should have more receivables. But the receivables ought not to mount more rapidly than the sales if the company is adhering to its traditional credit policy and maintaining its collection record.

Another way that we measure the liquidity of current assets in terms of receivables is to determine the receivables turnover. We have operating revenue or net sales of \$760,491,000, and gross receivables of \$74,944,000. Our ratio, then, shows us a turnover of 10.1 times. The more rapidly the receivables turn over, the shorter is the period of time that a given amount of working capital is tied up in receivables. Such a rapid turnover means that a given amount of working capital is doing more and more work, and the more rapidly it turns over the less danger there is of freezing working capital in receivables.

Let us consider the item of *inventory*. Inventory, of course, is the least liquid of the current assets. If we were to compare cash and marketable securities and receivables on the one hand with inventory on the other, we would find distinct features attributable to each.

Cash is definite. The value of the marketable securities is readily

ascertainable. The receivables, within certain limits, represent an actual amount that is due us. This is, however, not true of inventory.

We may show our inventory at a conservative value which may be lower than market value of \$95,943,000, but in order to realize that amount the inventory actually must be sold. Our marketable securities would have to be sold, it is true, but ordinarily there is such a steady market for them that no problem is involved. Our receivables in the normal operation of the business should turn into at least \$70,000,000. The inventory, however, could be turned to cash only if we deliberately sold it. If we found it necessary to sell the inventory, the amount which we would realize would probably be much less than the \$95,943,000 shown. Therefore, inventory presents a problem quite distinct in so far as the liquidating or realizable value is concerned—quite distinct from the cash, marketable securities, and receivables.

Inventory includes raw materials, work in progress, finished goods, and supplies. It should be valued at the lower of market or cost. The theory underlying the valuation of inventory is that all losses on inventory should be absorbed but no profits should be claimed. In other words, if we bought the inventory at \$100 and at the time of the balance sheet the market value of that inventory is \$90, there has been a loss of \$10. The balance sheet should show the inventory at the lower of market or cost, namely \$90, the market value, thus absorbing the loss. If, on the other hand, at the time of the balance sheet the market value of the inventory has risen to \$110, we do not show that increase in value in the inventory because that profit will not be realized unless and until the inventory has actually been sold. We therefore continue to value the inventory at its cost of \$100.

To measure the importance of the inventory, we take first the relation of inventory to total current assets. In Table 4 our inventory amounts to 48.8 per cent. Again, the percentage of the total current assets which the inventory represents will vary from industry to industry. Industries in which a large inventory is necessary will, of necessity, have a large part of their total current assets in inventory. In industries in which the amount of inventory required is relatively small, the opposite will be the case. The fact that a company has a large percentage of its total current assets in inventory does not mean that the company is poorly managed. We judge the adequacy of inventory in terms of the characteristics of the industry rather than in terms of one standard for all companies.

If, therefore, the current ratio of the company has increased, again it may not mean that the company is in a stronger working capital position. It may simply have more working capital tied up in inventory than it had the previous year, which may mean that it is less liquid than it was

the previous year. It is necessary to relate the change in the current ratio to the proportion represented by the inventory.

In doing this we determine the percentage relationship of inventory to operating revenue or to net sales, and here we see that it is 12.6 per cent. The significance of this figure depends upon whether it represents an increase or a decrease with respect to the previous year. If it represents an increase, the company may be facing the prospect of freezing its working capital in slow-moving inventory. It is to be expected that, when the company has had an increased volume of sales, it will need more inventory. However, if the inventory is increasing and sales are not (which would be reflected in the ratio), the indication in most cases is that the sales have fallen off and the inventory has remained about constant. In other words, working capital is being frozen in slow-moving inventory.

To test further the condition of the inventory, we use what is called the *inventory turnover*, which concerns the relationship of the net sales to the amount of inventory. It is determined by dividing inventory into net sales, and in this case we have a turnover of 7.9 times. Theoretically, the higher the inventory turnover figure is, the more favorable it is to the company. This is true because the more frequently the inventory turns over, the greater is the amount of work which a given amount of working capital can do in financing inventory. Furthermore, every time that the inventory is turned over there should be a profit, and hence the amount of profit realized increases as the rapidity of the turnover is increased.

There is no one standard for inventory turnover. Some companies, such as the chain grocery stores, will have a very high inventory turnover. It is a necessary feature of that industry. The same thing is true of the meat packing industry. On the other hand, companies like United States Steel, General Electric, or Westinghouse will have a relatively low inventory turnover because of the nature of the particular industry. Of course, this would be particularly true in the case of the railroad equipment companies.

To test out still further the liquidity of the current ratio, we use the *quick ratio*. The quick ratio is based upon the theory that of the four types of current assets, the least liquid is inventories. Therefore, if we eliminate the inventory from consideration and determine the amount of cash, marketable securities, and receivables available to satisfy current liabilities, we have an *acid test* of liquidity. The ratio of current assets less inventory to current liabilities is known as the *quick ratio*.

We have here a total of \$196,222,000 of current assets. If we subtract the inventory of \$95,943,000, the balance of \$100,279,000 representing

cash, marketable securities, and receivables is available for current liabilities of \$55,746,000, or a ratio of 1.8 to 1. This is the quick ratio and the assets we used are the quick assets.

We may go a step further in testing the liquidity of the current position by taking it on a truly cash basis. Suppose the company were to pay or were called upon to pay the current liabilities out of cash and marketable securities. How many times could it pay those current liabilities? In this case our current liabilities would be twice the amount of cash available, and we would have a ratio of 0.5 to 1. If we were to take it on a purely cash basis of cash to current liabilities we would have a ratio of 0.4 to 1.

The fact that a company does not have adequate cash to meet all the current liabilities is not a greatly unfavorable factor. In fact, if the company had a large amount of cash so that this ratio were 3 to 1, we might question the propriety of allowing such a relatively large portion of its working capital to remain idle.

MAINTENANCE AND DEPRECIATION

A consideration of the income statement has shown us that there are two important expenditures included in the operating expenses, namely, *maintenance* and *depreciation*, the first of which is a cash expense and the second of which is a noncash expense.

By maintenance, we mean the expenditures made to keep the fixed assets in operating condition representing expenditures for repairs, renewals, and replacements. The maintenance policy of a company is of significance to the investor in so far as it affects the efficiency of the asset involved.

The term *maintenance* does not necessarily mean the same thing in the case of railroads as it does in the case of public utilities and industrials. In the instance of a railroad, maintenance applies to maintenance of way and structure and to maintenance of equipment. By *way and structure* we mean the roadbed, cross-ties, ballast, rails, bridges, trestles, and stations. By *equipment* we mean the rolling stock—freight cars, passenger cars, and locomotives.

In industrial accounting, we make provision through *depreciation* for the ultimate retirement of an asset. In railroad operation, however, the assets consist of thousands of individual items and it is manifestly impossible to provide for the retirement of each item by the ordinary depreciation method of accounting. Railroads retire items each year. Some cross-ties are taken out and discarded. Parts of the rails are taken out and either moved to other parts of the line where the volume of traffic is less or are discarded. Therefore, this operation on the part of railroads

represents a replacement of individual parts, and the expenditure made to replace those parts is referred to as maintenance. It is true that the railroads do provide depreciation for some of their assets, but the provision for such depreciation is included in the maintenance charge. To a railroad, therefore, the maintenance charge is a much more inclusive item than it is for a public utility or an industrial company.

Three factors influence the maintenance policy of a railroad. The first factor is the physical condition of the property. Obviously, a railroad whose property is in good condition does not require as much annual maintenance as a railroad whose property is in poor condition.

A second factor that influences the maintenance policy is the volume of traffic. The larger the volume of traffic, the more wear and tear on the way and structure and the equipment; therefore, more maintenance is required.

In the third place, the financial policy of the management will affect the maintenance charges. If the management wishes to bolster up a falling income, it may deliberately reduce the amount spent for maintenance of its properties. This we call "skimping on maintenance." It means that the railroad is deferring until some future date certain maintenance expenditures which normally would be made now. For that reason we divide maintenance into two parts: current maintenance, representing the expenditures made now, this year; and deferred maintenance, or the maintenance that is being deferred to some future year.

While it is true that a railroad may temporarily defer some maintenance, it is equally true that it cannot permanently defer maintenance. There will come a time when that maintenance must be made. The longer it is postponed, the greater are the inroads it makes upon the efficiency of operation, and the greater is the risk the railroad assumes of accidents which may be costly in more than one respect. Hence, the analysis of the maintenance policy of a railroad is of vital importance in determining the efficiency of the operation of the railroad. Where the railroad is building up through skimping on maintenance, building up a deferred item which must be charged against a future year's earnings, and to the extent that such deferred maintenance is built up, the net earnings of the future years will be correspondingly reduced.

The question, therefore, naturally arises: How may the maintenance policy of the railroad be measured? If we look at the income statement, we find among operating expenses the amount charged for maintenance of way and structure and the amount charged for maintenance of equipment. This is stated in terms of dollars. But the mere number of dollars is not an adequate basis for measuring the adequacy, because there are changes in the costs of maintenance from year to year due to changes in

the costs of labor, material, and so forth. The measurement of the adequacy of maintenance must be in terms of some more accurate standard.

Before considering the standards generally used, however, let us examine some of the factors which determine the amount of maintenance required. The first factor influencing maintenance is the volume of traffic. Clearly, the greater the volume of traffic, the greater is the wear and tear on the railroad's equipment and way and structures, therefore, the greater is the amount of maintenance which must be made. This wear and tear on the equipment will vary from one railroad to another. If we are comparing two railroads, one of which has a higher traffic density than the other, it would be natural to expect that the railroad with the higher traffic density would have the greater wear and tear and, therefore, the greater need for maintenance.

By *traffic density* we mean a measurement which gives consideration to the volume of traffic and the distance that traffic is carried. To move one freight car one mile represents a given amount of maintenance and wear and tear. To move that freight car two miles represents additional wear and tear. Our figure of traffic density, then, is a measurement which we calculate as *the number of tons of traffic times the average distance carried, divided by the number of miles operated*. In the traffic density figure, we combine the volume in terms of tons, the distance and the amount of mileage devoted to such transportation service.

Another factor which enters into the difference in maintenance expenditures of the railroads is the number of tracks that the railroad has. Obviously, a double-track system running for ten miles will require more maintenance than a single track running for ten miles. Hence, it would have to have more maintenance provided.

The third factor that influences the wear and tear and, therefore, the required maintenance is the grade of freight carried. A railroad which carries a large amount of high-grade freight must, of necessity, incur greater maintenance than a railroad which carries low-grade freight. With high-grade freight, we have high value in small bulk. If, by chance, the roadbed is not in good condition, with the result that such high-grade freight is damaged in transit, the railroad has a high damage and claim item on its hands. If, however, the grade of freight that it carries is low—coal, for example—there is not much chance of any damage being done and the roadbed will not have to be maintained in such a high state of repair. Therefore, railroads that have a high percentage of high-grade freight must, of necessity, incur a relatively larger amount of expenditures for maintenance of way and structure and equipment than railroads carrying low-grade freight.

Another factor which influences maintenance charges is the character of the territory in which the railroad operates. A railroad which runs through mountainous territory must have equipment of greater weight and more tractive power than a railroad which runs through level territory. The maintenance charges on the heavy equipment will be much larger than those on lighter weight equipment. Also, additional locomotives are needed, pusher locomotives, to help haul the freight trains over the mountain grades, thus causing additional wear and tear and maintenance. The New York Central Railroad, in contrast with the Pennsylvania, running from New York to Chicago follows what is called *the all water level route*. It is a longer route, but it is over more level territory, whereas the Pennsylvania takes a more direct route through mountainous territory. It is natural, therefore, to expect to find that the Pennsylvania will have to incur proportionately greater charges for maintenance of way and structure and of equipment than the New York Central, largely because of the difference in the character of the territory through which it operates.

Another factor which influences the difference in maintenance charges is the climatic condition of the territory. Railroads in the northern part of the country have to incur additional expense in the removal of snow and ice from the tracks. In the springtime, other expenses are incurred as a result of thaws. The New York Central Railroad incurs substantial expense each year in running snow trains to remove the snow from its Montreal Division, whereas railroads that run through the southern part of the country, where the climatic conditions are so different, do not have to incur that expense.

Recognizing all of these factors which determine the amount of maintenance expense which a railroad must, of necessity, incur, how can we determine whether the railroad is providing an adequate amount for such maintenance? There are two bases: first, the volume of traffic, and second, the way and structure and equipment to be maintained.

We commonly measure the adequacy of maintenance with reference to the volume of traffic by using the operating revenue as a basis. The theory underlying that ratio of maintenance to operating revenue is that the operating revenue is one indication of the volume of traffic. It is a financial ratio.

If we were to measure the maintenance in terms of volume of traffic on an operating basis, we would compare the maintenance charges to the total ton miles. A ton mile represents the movement of one ton of freight one mile. Therefore, we multiply the number of tons by the average miles moved and we have what is referred to as the *ton mileage*. To find the total ton mileage of a road, we generally add the ton miles based

upon the freight traffic, and the passenger miles based upon the passenger traffic. To add ton miles and passenger miles is like adding apples and oranges. Therefore, a basic method of computation has been to consider three passenger miles equal to one ton mile, placing them both on an equivalent basis.

To measure the adequacy of maintenance with reference to equipment or way and structure to be maintained, we relate the miles of road operated to the cost of maintenance of way and structure. The resultant figure gives us the amount expended for maintenance per mile of road operated.

This ratio has one distinct weakness, of course, namely, that a mile of road may represent first-line tracks, second-line tracks or third-line tracks in the case of one road, and only first-line tracks in the case of another. To eliminate that distortion, the Interstate Commerce Commission has a figure known as the *equated track mile*, which gives a weight of 100 to first-line track, of 80 to second-line track, and of 50 to all other tracks. The resultant calculation of the equated track mile eliminates the distortion with respect to the number and kinds of track involved.

In the case of public utilities, the maintenance charge is the ordinary type of maintenance charge, and we generally measure its adequacy on a financial basis with reference to the operating revenue. The ratio used, then, is that of maintenance to operating revenue.

The maintenance expenditure in the instance of a public utility is invariably given in the income statement. Industrial income statements, however, do not always report the amount charged for maintenance. But, by and large, that is no great handicap, because maintenance, so far as an industrial company is concerned, is not as important as it is in the instance of railroads and public utilities. We might say that, in the order of importance, maintenance is most important in the analysis of a railroad and least important in the analysis of the industrial.

This brings us to the second item, *depreciation*, by which we mean the loss in value sustained by an asset by virtue of wear and tear or obsolescence. Depreciation, as such, applies to fixed assets—plant and equipment.

In one sense, the amount invested in the asset represents a prepayment by the company. If the company buys a new machine for \$10,000, it is making a payment now for the use of that machine over the next ten years, assuming ten years to be the life of the machine. Therefore, we might consider that investment of \$10,000 to be a prepayment which will be written off over the life of the asset.

In the analysis of depreciation we must also give consideration to

maintenance. A company which skimps on the maintenance of an asset lessens the serviceable life of that asset and thereby hastens the actual depreciation, thereby necessitating an increased annual depreciation charge. On the other hand, a company which makes very liberal appropriations for maintenance may thereby extend the life of that asset and, therefore, the period of usefulness, and thereby reduce the annual depreciation charge as well as the actual depreciation. The most liberal policy of maintenance, however, cannot eliminate the need for providing for depreciation. No matter how liberal may be the policy, no matter how much may be spent on maintenance, the asset will ultimately depreciate and have to be replaced.

Three factors enter into the calculation of the annual depreciation charge. The first is the cost of the asset. The second is the estimated service life of the asset. The third is the scrap or residual value of the asset.

Let us assume that an asset cost originally \$100,000; that it has an estimated service life of ten years; and that it has an estimated residual or scrap value of \$1,000. That would mean that during the ten-year period the value of that asset will have decreased from \$100,000 to \$1,000, a loss in value of \$99,000. Since the loss in value will have occurred over a ten-year period, or at the average annual rate of \$9,900, this amount might be considered to be the annual depreciation charge. That annual depreciation charge, therefore, represents the writing off of the depreciable value during the life of the asset.

There are two ways whereby companies set up rates of depreciation. A rate may be established for each individual asset subject to depreciation. This is known as the *unit rate*. On the other hand, a group of similar assets may be considered as a group and a rate assigned to them as a group. This is known as a *composite rate*.

From the standpoint of the analyst, we have no way of determining which method has been applied by the company in providing for the depreciation of its depreciable assets. Sometimes a company may shift from one basis to another and the effect of that shift results in a change in the calculation of net earnings. Obviously, if a company shifts from the unit basis to the composite basis in 1946, to compare its figures in 1945 with 1946 would be inappropriate because of the change in the method of calculating the rate of depreciation, unless the company reports the charge which would have been made in 1945 had the method in use in 1946 been applied in the former year. Our interest, therefore, in whether the unit basis or the composite basis is being used is simply to the extent that there has been no change in the basis so that no

distortion can arise in comparing the figures for the two periods concerned.

A distinction should also be made between actual and theoretical depreciation. By *actual depreciation* we mean that each year the asset loses some value. There is an actual loss in value. It is reasonable to expect that the loss in value the first year will be small, the loss in value the second year will be larger, and the loss in value the third year still larger. If, therefore, we were required to charge as depreciation an amount based upon the actual loss in value, the charge for depreciation should increase each year. But one of the most difficult things to do is to determine the amount of loss in value in an asset for a period of a year. For that reason, we have what we call the *theoretical depreciation* in which we assume the total depreciable value during the life of the asset and charge that off at a regular annual rate.

In the instance we considered above, we determined that the total depreciation would be \$99,000, and we assumed a serviceable life of ten years. Therefore, we made an annual charge at the rate of \$9,900. This is an accounting method of providing for the loss in value or the theoretical depreciation, and we commonly refer to that method as the *straight-line method*. Under the straight-line method, obviously, the amount charged for depreciation the first year will be far in excess of the actual depreciation. That asset undoubtedly will not depreciate by \$9,900 the first year nor, by the same token, will it have depreciated by the same amount during the second year. During the early life of that asset, we will have been charging off depreciation at a more rapid rate than the asset has actually depreciated. However, in the later years of the life of the asset, the rate of actual depreciation will be very rapid and this \$9,900 will be less than the actual depreciation. We build up a reserve, in other words, in the early years, so that the two tend to balance out. Hence, we find that the most commonly employed method of calculating depreciation is the straight-line method.

Why do we charge depreciation? We invested \$100,000 in an asset. At the end of ten years, it will have a value of \$1,000. There will be a depreciation of \$99,000. It is necessary that we protect that initial investment of \$100,000, and we protect it by charging against each year's income an equitable share of that total depreciation. The theory underlying the practice of charging depreciation, of course, is that we are thereby making provision for the replacement of a replaceable, reproducible asset. That is the distinction between depreciation and *depletion*. Depreciation refers to a reproducible, replaceable asset whereas depletion refers to a nonreproducible, nonreplaceable asset.

The analyst is faced with the problem of evaluating the depreciation

charges which are made. The analyst, however, cannot determine whether the unit rate charged for each asset or the composite rate for each group is adequate. He has no basis upon which to measure this accurately. The only thing that the analyst can do with respect to the depreciation policy of the company is to work in terms of the total depreciation charge and to use that total depreciation charge in two ways: first, to determine whether the company under analysis is charging more or less for depreciation than similar companies in the same industry; second, to determine whether this company is apparently changing its depreciation policy. The basis of determining the adequacy must be a comparative basis. It must be determined by comparing the company with others in the same industry and by comparing this company's depreciation over a period of years.

Two ratios may be employed in making these comparisons. The first is that of depreciation charges as related to the volume of business. The second is the ratio of depreciation to invested capital.

The theory underlying a comparison of the depreciation charge with the volume of business is that the greater the volume of business, the greater is the wear and tear on the asset, and, therefore, the depreciation is accelerated. As an indication of the volume of business, we take the operating revenue or the net sales. In the company whose simplified income statement is shown in Table 1, we had a depreciation charge of \$11,374,000 and operating revenue of \$760,491,000. The depreciation represented 1.5 per cent of the operating revenue. To judge whether that is adequate or not, we compare it with other companies in the same industry, and then we compare it for this company over a period of years.

In the case of a company whose income or revenue is increasing, but which, other things being equal, is not increasing its depreciation charge, we are entitled to question whether the company is making adequate provision for depreciation or whether it is building up a deferred depreciation charge which will have to be made against the earnings of future years.

We have already seen that there is a distinct relationship between maintenance and depreciation, and to the extent the company makes adequate provision for maintenance, it maintains the life of the asset and may extend it. Therefore, in order to give consideration to both the maintenance and depreciation policy, we have the next ratio of *maintenance and depreciation to operating revenue*. If a company were expending large amounts for maintenance and, therefore, lengthening the life of the asset correspondingly, the depreciation charge would decrease. If we were to consider the depreciation charge alone and see such a decrease, we might conclude inaccurately that the company was reducing its depre-

ciation unwisely. By combining maintenance and depreciation, the increase in maintenance offsets the decrease in depreciation.

Conversely, if the company were skimping on maintenance which, therefore, would tend to accelerate the loss in value of the asset and make necessary an increased depreciation charge, failure to increase the depreciation charge would be evidenced by the fact that the total of maintenance plus depreciation would be a decreasing percentage of the operating revenue.

We have mentioned the ratio of depreciation to invested capital. The amount of investment in fixed assets as evidenced by the gross plant account is the amount which must be depreciated. Hence, we commonly employ the ratio of depreciation to gross plant expressed as a percentage, which reveals the rate at which the company is depreciating its plant account. The percentage computed for the year just ended indicates the current rate. If we compare these percentages over a period of years, we have an indication as to whether the company is increasing or decreasing the rate at which it is depreciating its gross plant.

The supplementary ratio of the depreciation reserve to the gross plant expressed as a percentage indicates the extent to which the asset has been depreciated. In Table 2, we have the depreciation reserve of \$122,541,000 and gross plant of \$190,630,000. In other words, 64 per cent of the gross plant account has been depreciated. By using the ratio of depreciation charged for the year to gross plant account, we indicate the annual rate of depreciation. The ratio of depreciation reserve to gross plant indicates the cumulative rate at which the asset has been depreciated to the present date.

The significance and importance of maintenance and depreciation vary with the nature of the industry. Obviously, in an industry in which a large investment in fixed assets is necessary, the maintenance and depreciation policy of the management is most important. That is why, in the railroad and public utility fields, generally speaking, maintenance and depreciation policies are much more important than in the industrial field as a whole. However, even within the industrial field we find variations. Certainly, the maintenance and depreciation policy of General Motors or United States Steel would be important, but the maintenance and depreciation policies of such companies as Coca-Cola would not be as important because there the investment in fixed assets is relatively small.

In the second place, the question of maintenance and depreciation is important in a company whose financial structure includes a large proportion of funded debt. This is true because, if such a company reduces its maintenance or depreciation charges, it will therefore increase the income available for the bonds, though, by so doing, it weakens the position

of those bonds in that the assets are overstated and undermaintained. In a company which simply has stock outstanding, maintenance and depreciation, of course, will be significant in so far as they affect the income available for the stock. The importance, therefore, will vary according to the character of the industry and the individual company.

VALUATION OF FIXED ASSETS

We saw, in looking at the balance sheet, that there were two chief forms in which the capital of the company could be invested. One is the working capital form, as evidenced by the current assets. The other is in the fixed capital form, as evidenced in part by the fixed assets—the plant and equipment account.

The relative importance of fixed assets in a balance sheet will depend largely upon the character of the industry. The very nature of railroad operation requires a very large amount of capital in road and equipment, with the result that we will find in many railroad statements that the road and equipment account will represent 75 to 80 per cent of the total assets. The same thing is true of public utility operating companies. The larger investment required in fixed assets in utility plants will generally result in that account representing a large percentage of total assets. In the industrial field, we find wide variation from one industry to another. Uniformity is not a characteristic of the industrial field in this respect.

We have seen that the two problems facing the analyst deal with the solvency and the solidity of the company. We sought to measure the solvency of the company by the relationship of the current assets to the current liabilities. We seek to measure the solidity of the company by the relationship of the fixed assets to the fixed liabilities. The funded debt, which represents long-term obligations, is fixed in amount, as specified in the balance sheet. Basically, those long-term debts look to the long-term capital investments.

We have here the same problem that is common with all assets. This problem concerns their valuation. What are the fixed assets worth? Are the fixed assets adequate to meet the fixed liabilities?

Just as the current liabilities look to the current assets so, likewise, do the fixed liabilities look to the fixed assets and say, "How much value is here to support my claim?" When, of course, we sought to answer that question for the current liabilities, we found we did not have a particularly difficult question to answer since the current assets were stated, to begin with, at their cash or liquidating value. When we deal with the fixed assets, however, we do not have such an easy or simple basis of

valuation. The problem is much more complex. Let us, therefore, give our attention next to this question of the valuation of the fixed assets.

Basically, of course, the fixed assets should be valued at original cost less depreciation. The value thus shown on the books is the *book value*. Let us see what goes into that book value.

Let us assume that we have set up our fixed asset account. We find on the debit side the original cost of the assets, plus any such additions as have been made in the meantime. On the credit side, we have the depreciation reserve, which has been set up to provide for the loss in value of the asset, and we also have, of course, any retirements of assets out of the account. The balance of the debit and credit sides gives us our book value.

However, there are many special considerations to which we must direct our attention. Was this original cost figure inflated? Was it more than it should have been? Has the company, over the life of the assets, expended sums for the maintenance of those assets and then capitalized those expenditures instead of charging them to operating expenses? Has the company in the meantime made additions and betterments which it has charged to operating expenses instead of capital account? Has the company set up adequate depreciation reserves?

To determine the true book value, all of those questions must be considered. We do not, however, have the data to do that in the ordinary report. The book value as shown is a historical fact. We want to know what the assets are worth today, not what they cost or what bookkeeping provision for reserves have been set up. We are interested in determining the current value. Again, we are not in a position to determine that from the data at hand, but we can say that the assets are worth a figure related to what they can produce in income. It is the productivity of those assets that commands our attention.

We therefore employ the ratio of the *operating revenue* to the net plant or the gross plant account. In the instance of a railroad and a public utility, we measure this relationship between the plant account and the operating revenue by the ratio of gross plant divided by operating revenue. The theory underlying that ratio is that the gross plant ought not to exceed more than a given number of times the operating revenue. For example, we say in the case of a railroad that the road and equipment account ought not to exceed four times the operating revenue, meaning that if it does exceed four times the operating revenue it arouses the suspicion that the road and equipment account is overvalued. The same ratio is employed in the case of public utilities, namely, gross plant to operating revenue. There is no one standard ratio for public utilities because it will depend entirely upon the character of the company. The

theory underlying the relationship between gross plant and operating revenue is that the value of the fixed assets should be based upon the earning power, and that if the earning power is too small, the asset is overvalued.

In the case of an industrial company, we generally make this computation by dividing the net sales by the net plant account, the result showing us the dollar of sales per dollar of plant investment. The figures given here give net sales of \$760,491,000, net plant of \$68,089,000, showing \$11.16 of net sales per dollar of net plant investment. The significance of any such calculation in an industrial company will be measured by comparing the same ratio over a period of years to see whether the company is showing greater or less dollars of net sales per dollar of net plant, and, of course, by comparing this company with other companies in the same industry.

In computing this ratio we use gross plant in the case of public utilities and railroads because the gross plant account is the basis upon which the rate base is determined. In industrials, we have no such rate base determination and, therefore, we use net plant.

CAPITALIZATION AND CAPITAL STRUCTURE

By capitalization we refer basically to the two sources whence the capital has been derived: from long-term creditors in the form of funded debt, and from stockholders, as evidenced by the net worth. The company is expected, with the capital that it has, to earn sufficient income to pay the interest, the fixed charges, on that funded debt. Also, it is expected to earn a satisfactory rate of return on the stockholders' investment.

In the case of the company whose figures are shown in Table 2, we have funded debt of \$36,090,000, net worth of \$150,332,000, or a total of \$186,422,000, of which the long-term creditors supplied 19 per cent and the owners 81 per cent.

In the case of a railroad, the calculation of this relationship must take into consideration the question of leased roads. In a railroad's income statement, there appears among the fixed charges the item *rent for leased roads*. That rent is a fixed charge. It is comparable to the interest which the railroad otherwise would have to pay upon bonds it might have issued. That is, it might construct its own line instead of leasing existing facilities, in which case it would have to issue bonds and provide interest service thereon. The rental, therefore, which it pays for leased lines is comparable to the interest which it would have had to pay on its bonds had it issued bonds to finance an addition.

For this reason it is customary in calculating the capitalization of a

railroad to add to the funded debt the capitalized lease rental. In other words, we take the rental as shown in the income statement and we capitalize it at 5 per cent or we multiply the rental by 20. That 5 per cent has been more or less arbitrarily assumed as the rate of interest which the railroad would have had to pay had it issued the bonds. The result is that the creditors' interest is evidenced by the funded debt plus the capitalized lease rentals, and the owners' interest, of course, by the capital stock account. It is only in the instance of railroads that we include the capitalized lease rentals among the fixed charge obligations in calculating the capitalization.

In the case of railroads and public utilities, the theory has always been that because of the large amount of capital needed and the stability of earnings, the railroads and public utilities could afford to have a very large percentage of their total capitalization in funded debt. That has long since been shown to be untenable. That the railroads were not in a position to enjoy stability of earnings was evidenced in the 1930's. To-day, we say that a railroad capital structure ought not to have more than 50 per cent in fixed charge obligations, that is, funded debt plus capitalized leased rentals. The traditional standard was formerly 60 per cent. Public utilities have enjoyed a higher degree of stability than railroads, and they may have as high as 60 per cent, generally speaking, in fixed charge obligations. Industrial companies ought not to have more than 25 per cent. The theory underlying this differentiation in the percentages is based on variations in the stability of the earnings of the different types of industry.

Directing our attention for a moment to industrial companies, we find that a very commonly employed ratio is that of *net worth to total debt*. The purpose of this ratio of net worth to total debt is to compare the creditors' and owners' respective investments in the company. By the net worth, of course, we mean the owners' interest or equity in the company. By the total debt, we mean the creditors, both long term and short term.

Reference to our balance sheet will show us that this company has a funded debt of \$36,090,000 and current liabilities of \$55,746,000. The total debt is the sum of the funded debt and the current liabilities. Therefore, we have \$150,332,000 of owners' interest or net worth, supporting \$91,836,000 of creditors' interest or claim. That net worth is a cushion supporting the claim of those creditors. That net worth would have to be completely wiped out before there would be insufficient assets, so far as the balance sheet is concerned, available for those creditors.

Here we have \$1.63 of net worth supporting \$1 of total debt. The

larger the amount of net worth supporting the total debt, the stronger the position of the creditors and the stronger the owners' position.

Another ratio is that of *net worth to net fixed assets*. Here we have \$150,332,000 of net worth and \$69,080,000 of fixed assets, meaning that we have \$2.18 of net worth for \$1 of net fixed assets. This ratio is based on the theory that the owners should make their contribution to the fixed assets and not expect the long-term creditors to supply all of the fixed capital. Therefore, this ratio should be at least one to one.

Let us consider the matter of the asset protection of the debt. In other words, what is the asset value available to support the funded debt of the long-term creditors? We have the ratio of net fixed assets, \$69,080,000 to funded debt of \$36,090,000. In other words, \$1,913 of net fixed assets supports each \$1,000 of funded debt.

This ratio may be employed in the public utility and in the industrial field. We find, however, that it is not entirely satisfactory in the railroad field because it is characteristic of the railroads that each bond is a lien upon a particular part of the line. For that reason, there is no logic in comparing the total valuation of the line to any particular bond or to the total funded debt. However, in public utilities and industrials, where the total funded debt is a claim against the total fixed assets, this ratio is much more applicable.

Finally, we have the ratio of *the net working capital to the funded debt*. With net working capital of \$140,476,000, and funded debt of \$36,090,000, there is \$3,892 of net working capital supporting each \$1,000 of funded debt. This is an important ratio. When we computed the ratio of the funded debt to the net fixed assets, we of course were taking the balance sheet value of those net fixed assets. We have already seen the difficulty involved in appraising their value. In the present ratio, where we take the net working capital and relate it to funded debt, we are taking liquidating value as a basis. Obviously, it is much easier to determine the value of the current assets than to determine the value of the fixed assets.

This ratio is important, likewise, because this \$140,476,000 of net working capital is available to support the fixed charges on the funded debt. It is available to pay the interest charges which must be paid on the bonds. The net fixed assets, as such, would have to be liquidated to do this. However, the working capital is there in a liquid form and can perform and does perform that function. Furthermore, if the company has adequate working capital to support its funded debt, the ultimate retirement of the debt is facilitated. We have all noticed, no doubt, the large amount of cash and marketable securities that some of our companies have at the moment which enables them, therefore, to retire bonds as they mature.

ANALYSIS OF THE INCOME STATEMENT

We shall consider now the question of analysis of the income statement. Previously we discussed the setup of the income statement and saw that it revealed to us the amount and sources of income and the amount and kinds of expenditures made and charged against that income. Our task here will be to give further consideration to that income statement from the standpoint of considering the earning power of the company, the adequacy with which fixed charges have been earned, and the basis of distribution of dividends to the stockholders.

We may observe that there are three basic considerations. First, we are interested in measuring the earning power with respect to the volume of business that is done and with respect to the invested capital. Is this company earning as much as it should? How does its earning power compare with that of other companies in the same industry?

Second, we are interested in measuring the earning power in relation to fixed charges. The fixed charges arising out of the funded debt represent a burden which the company must meet. Is it in a position adequately to meet these fixed charges? Are these fixed charges earned by a comfortable margin, or is the company just barely able to meet them?

Third, we are interested in the dividend prospects of the company as evidenced by the amount of income which is available for distribution to the stockholders. We fully realize that the declaration of dividends is discretionary with the board of directors; that dividends are payable when earned and declared; that the management, therefore, has the option of declaring dividends or not declaring dividends; that the management has the option of determining the amount of dividend which will be declared; and that the management has the option as to the form in which the dividend may be declared and paid. What has been and what is the apparent dividend policy of the management? Consideration of that dividend policy involves consideration of the dividend record. In other words, we consider what has been and is now being done as a guide to what may possibly be done in the future.

Let us take the various parts of this income statement as we set it up originally in Table 1 and examine the relationships between them. First, let us consider the operating revenue or net sales.

We analyze the operating revenue or net sales figure over a period of years for the purpose of determining two things: (1) the changes which have taken place in the *amount* of revenue or net sales, and (2) the changes which have been taking place in the *sources* of the operating revenue or net sales.

Our analysis of the change in amount is made on a percentage change basis. That is, we determine the annual percentage of change in the

total amount over the period of years involved for the purpose of determining whether the rate of increase is constant or whether the company is increasing its revenue or net sales at an accelerated rate. Further, we are interested in determining whether the increase is at a decreasing rate. In other words, is this company growing? Is it growing at a faster or a slower rate? Does it still have prospects of further expansion, or has it reached what we might call a saturation stage where the rate of increase is at a decreasing rate?

We analyze this figure, also, to determine the sources of the operating revenue or net sales and to ascertain if there are any changes in those sources.

A public utility operating company is limited by its franchise to a particular territory. Its operating revenues will be derived from within that territory. For that reason an analysis of the territory is necessary in order to determine the revenue prospects of that utility from that territory. After all, if the territory is expanding in population and there is a growing demand for the public utility's service, we have one thing. On the other hand, if the population is decreasing and industries are moving away, that condition will obviously be reflected in a decreased demand for the service.

Furthermore, we find in the analysis of a public utility company that the markets which it serves may be classified as to the demand from domestic consumers, the demand from industrial consumers, and the demand from commercial consumers. We find that each of these markets will vary as far as the rate that prevails and that each will differ in the degree of stability. Therefore, we should like to know if this company depends largely upon industrial demand, which is subject to wide fluctuations, or if it depends largely upon domestic demand, which is much more stable.

The foregoing remarks are likewise true of the railroad that serves a distinct territorial unit, and, hence, we must make an analysis of that territory to determine the prospects of earnings from that territory.

When we are concerned with an industrial company, we do not have the same limitations as to territory because, while an industrial company may be serving a local market, in most cases with which we would be likely to deal, it would probably be serving a national market or even an international market and, hence, we have a much wider territorial field for analysis.

A company like International Harvester, with both a domestic and foreign market, presents to us, in addition to the necessary analysis of the domestic market, the problem of determining whether the foreign market is becoming more or less important as a source of net sales and

what the prospects are for a growth in that foreign market. We are further interested, for example, in the extent to which changes take place in the importance of trucks as against tractors as a source of net sales. If we were analyzing a company like Du Pont, whose market may be divided, roughly, into about eleven or twelve divisions, we would be interested in knowing what changes were taking place in the relative importance of the chemical industry as an outlet for its products, for example, or the textile industry as an outlet. Or, if we went to a company like Eastman Kodak we would want to know what significance was attached to the company's entrance into the textile field in so far as future revenues are concerned.

Therefore, we have to analyze not only the total revenue or net sales and the changes in that total, but also the markets that contribute to that total, to determine whether or not there are any significant changes in the relative importance of any one or more of those markets. That is why, in the case of the analysis of an industrial company, the analysis of the industry precedes the analysis of the company. We will go more into detail on this subject when we come to the analysis of industrial securities.

We notice, in looking at the income statement, that we reported the operating revenue or net sales and the operating expenses incurred to obtain that operating revenue or net sales. The relationship between the operating expenses and the operating revenue or net sales we call the *operating ratio* and we express it as a percentage. Referring to the income statement in Table 1, we see that we have operating revenue of \$760,491,000 and operating expenses of \$651,675,000 or 85.6 per cent. Theoretically, that operating ratio means that it cost this company 85.6 cents to get one dollar of operating revenue.

There is no one standard operating ratio which we may employ and by which we may judge the standing of any company, because the operating ratio in any one industry is more or less peculiar to that industry. We find that the meat packing industry, for example, will have an operating ratio that will run well over 95 per cent. In fact, in one calculation over a period of years, it ran 97.5 per cent. This does not mean that the meat packers are inefficient or that they have to spend or do spend too much to get a dollar of revenue. This ratio is simply a feature of the industry. It is a tribute to the industry's efficiency that it can still show satisfactory profits.

Therefore, since there is no one standard operating ratio by which to be guided, we make a two-fold interpretation of the ratio. First, we compare the ratio with the ratio in previous years. Second, we compare it with the ratio of other companies in the same industry.

Earlier in our discussion we mentioned that, theoretically, this ratio is a measure of efficiency of operation, and, theoretically, a more efficient company would spend less to get a dollar of revenue than would a less efficient company. However, we must also remember that we pointed out at the outset that there is no perfect ratio and that every ratio has distinct limitations.

In this ratio, the item of operating expenses deserves careful consideration. We know from our previous experience that the operating expenses of a company may be divided into two classes: (1) the fixed expenses that are incurred regardless of whether it is a good year or a poor year; and (2) the variable expenses, or those which change or may change for one reason or another. In good years, there will be more employees and a higher pay roll; raw materials may be higher in price, therefore, the cost of buying them is increased. In a period of depression, we would have smaller staffs, lower pay rolls, and inventory purchased at lower prices.

We will also recall that included in the operating expenses are two items over which the management has direct and arbitrary control: cash expenditures for maintenance and noncash charges for depreciation. Therefore, a decline in this operating ratio may not reflect increasing efficiency on the part of management, but rather an arbitrary reduction in the amount charged for maintenance and depreciation. When we discussed maintenance and depreciation, we found that we were able to determine whether the management was changing its policy with respect to such charges. Thus, in the analysis of the operating ratio, it is impossible to give too much credence to it without giving consideration to any changes which have taken place in these charges which are directly subject to control by the management.

This brings us to the next item in the income statement, the *operating profit*, which is the difference between the operating revenue or net sales and the operating expenses. It represents, therefore, the net amount from operations available to meet the claims of the creditors and the interest of the stockholders. The operating profit may be expressed as it is here, in dollars, or, on the other hand, as a percentage. If we were to express it as percentage, it would be the relationship between \$108,816,000 of operating profit, and operating revenue or net sales of \$760,491,000, or a return of 14.4 per cent. This is sometimes referred to as the *margin of profit*. Of course, mathematically, the margin of profit expressed as a percentage is the reciprocal of the operating ratio. This, we find, gives us the information that we want with respect to the changing earning power of the company as pertaining to its operations.

NONOPERATING INCOME

In the income statement as we set it up, we said that the company may also derive income from activities other than operations, and we referred to that as nonoperating income. Let us now, therefore, give our attention to the nonoperating income of the company.

When we considered the balance sheet, we saw in the current assets the item *marketable securities*, which was one source of nonoperating income. We noted that the main objective of the company in the purchase of those marketable securities was to find temporary employment for excess cash which could not be used profitably in the financing of inventory or receivables; that in making the investment of those excess funds, the company was primarily interested in a high degree of liquidity in the commitment and was perfectly willing, therefore, to sacrifice income to gain that liquidity. Hence, these temporary investments, these marketable securities, generally yield a relatively small return. Their importance as nonoperating income lies more in the stability than in the amount because, after all, they consist primarily of federal, state, and municipal bonds where we do have that stability of income. Marketable securities, therefore, are more significant for the stability of return than for the amount, and the income is deliberately sacrificed to gain that liquidity.

We also noticed in the balance sheet the account which we referred to as the *investment account*, evidencing the investment of capital on a more or less permanent basis and in the form of securities, in most cases represented by investments in the stocks of subsidiary companies. These constitute another source of nonoperating income. We find in most cases, however, that the contribution of these investments to the total income is much more important than that made by the marketable securities, representing temporary investment of current assets. In most cases, these stocks are bought for the purpose of obtaining income from subsidiaries.

These investments, therefore, in contrast with the marketable securities, are much more important in so far as the amount of income is received. There is not always the assurance, however, that the amount will remain constant or be stable, because there may be years when the subsidiaries are unable to pay the same dividend and the income derived from this source may be decreased.

A third source of nonoperating income is in the form of property of one kind or another. Cluett, Peabody & Company grants licenses to other companies to use its *sanforizing* process and receives income in the form of royalties. Other companies, such as General Electric, Westinghouse, and R. C. A., grant licenses on their patents. These patent rights, and the license fees flowing therefrom, constitute a source of nonoperating

income; in many cases a rather substantial amount of income is derived from such a source.

When we note that the total of the operating profit and the nonoperating income constitutes the total income received by the company, we ask ourselves two questions: (1) To what extent is this nonoperating income recurring or nonrecurring? (2) To what extent does this nonoperating income constitute a cushion supporting the total income?

Let us consider the first question in connection with recurring or nonrecurring nonoperating income.

By recurring nonoperating income we mean the income that is received steadily year after year. The nonoperating income included in the income statement of the General Electric Company, for instance, is there year after year in substantial amount. It is what we call *recurring* income.

On the other hand, by nonrecurring income we mean nonoperating income received currently which probably will not be received in subsequent years. When a company sells some property and makes a profit, it includes the profit as nonoperating income and it is nonrecurring. Johns-Manville Corporation, when it established the Johns-Manville Sales Corporation, a subsidiary, to finance the sale of products by the parent company, received no dividend from the subsidiary for several years. Then it did receive a dividend. The dividend which it received was paid out of the earnings of the subsidiary for the previous three years. It was clear, therefore, that the parent company would not receive the same amount of dividend in the fourth and fifth years because it was not an annual dividend but an accumulation. Therefore, in analyzing the outlook for Johns-Manville in that third year, contemplating its position in the fourth year, we could not count on the receipt of the same amount of dividend. Subsequent events show that the company received in the next year simply a regular annual dividend from the subsidiary.

Thus we see that nonrecurring nonoperating income is received currently; but in estimating future income we must disregard it because it probably will not be received. Therefore, the existence of recurring nonoperating income is much more important than nonrecurring income because it is recurring. And, the fact that it is recurring places it in the position of a cushion underlying the stability of the total income. When the analyst contemplates what the probable earnings for the coming year will be for a company that has recurring nonoperating income, he gives full consideration to the receipt of an amount of other income or nonoperating income similar to that received during the current year because it is recurring.

In 1932, 75 per cent of the income received by the General Electric

Company was received in the form of nonoperating income. Obviously, the nonoperating income that year served as a cushion to the stability of dividend payments. If the dividends were to be paid solely out of operating income, they probably would not have been paid.

When we make an analysis of Du Pont we must, in fact, make an analysis of Du Pont and then an analysis of Du Pont less its General Motors investment. In other words, to measure the earning power of Du Pont as a chemical company, we have to eliminate its General Motors investments because it has, roughly, nine-tenths share of General Motors for every share of Du Pont.

Referring to Table 1, we note that the company has nonoperating income of \$2,065,000. The total income is \$110,881,000 or, in other words, the nonoperating income is about 2 per cent. The extent to which nonoperating income is important to a company will vary from one company to another. There is no standard. To a company like the Union Pacific Railroad, nonoperating income is a very important item. Union Pacific paid dividends in some years solely because of its nonoperating income. To Du Pont, to General Electric, to Cluett Peabody, for example, we will find that this nonoperating income—this recurring nonoperating income—is a very important part of the company's total income. To other companies, you will find, it is relatively unimportant. Although there is no basis of comparison, to the extent that the nonoperating income is important, appropriate consideration must be given to it in calculating the prospective earning power of the company.

FIXED CHARGES

We come next to a consideration of the position of the bondholders. We have seen that bondholders, being creditors, have a first claim against earnings, and that the amount of income available to pay the fixed charges is the income available from operating and nonoperating sources less the deductions and adjustments necessary. In this case, with \$108,816,000 of operating profit and \$2,065,000 of nonoperating income, we have \$110,881,000 available for the payment of fixed charges. The bondholders look to that amount for the satisfaction of their claims as evidenced by the fixed charges.

To say that there is \$110,881,000 available for fixed charges does not mean very much. We are further interested in the adequacy of that amount. In our working capital analysis we saw that the statement of the net working capital in dollars gives no clear picture of the position. Likewise, the statement of the amount available for fixed charges in terms of dollars gives no clear statement of the adequacy of the amount available. The only way we can measure the adequacy is to compare

it to the fixed charges which look to it for support and for payment. Therefore, in calculating the adequacy of the amount available for the fixed charges, we use the term *times fixed charges earned*.

In this case, we had \$110,881,000 of total income and we deducted from that the provision for contingencies of \$5,610,000. The balance, therefore, is available for the payment of the fixed charges. If we refer to the income statement in Table 1 we will see the figures. The amount of fixed charges which must be met is \$1,796,000. There is enough available, then, to pay the fixed charges in this instance 58.6 times before taxes. That calculation gives us *times fixed charges earned before taxes*.

The question arises as to whether we should make this computation before deducting the provision for contingencies from total income, since fixed charges represent the first claim on that income. It is true that in the case of foreclosure the amount set aside for contingencies would be available to the bondholders, but we are interested in a going concern, not in a liquidating concern. Furthermore, in making any calculation, we should always take the more conservative point of view. We should consider the worst possible conditions in measuring the strength of our claim. If we leave the provision for contingencies in the amount available for fixed charges, we are being extremely liberal in spite of what the management has indicated it is doing and we are tending to overstate the adequacy. It is better to understate it than overstate it.

This calculation of *times fixed charges earned* is also made after consideration has been given to taxes. Here we have \$110,881,000, then we had a provision for contingencies of \$5,610,000, and taxes of \$81,996,000. The net amount, therefore, after taxes, was 12.9 times the fixed charges.

A calculation of this figure before taxes is based on the premise that we are measuring the earning power. A calculation made after taxes is in recognition of the priority of claim of the taxes and indicates the earnings available for the fixed charges or for the stockholders after the claim of the government has been paid. The one indicates the earning power before taxes, and the other the earnings available after taxes.

Another ratio employed with respect to the fixed charges is the relation between fixed charges and operating revenue or net sales. The purpose of this ratio is to determine to what extent fixed charges are a burden on operating revenue or net sales. Obviously, a company whose operating revenue or net sales is subject to wide fluctuations can ill afford to have a large percentage of fixed charges relative to the operating revenue. Since the fixed charges remain fixed, any rapid or sizeable decline in the operating revenue would naturally be reflected in a decrease in the earnings available for the payment of those fixed charges.

There is no standard ratio. The significance would lie in determining

whether the percentage is increasing or decreasing over the period of years under consideration.

NET INCOME

After the payment of the fixed charges, we have next the interest of the stockholders as evidenced by the net income. The net income represents the stockholders' return on their investment. We measure that return on their investment by determining the percentage of net income to net worth. In this case we see that net income was \$21,479,000 and net worth \$150,332,000, or a return of 14.3 per cent. The significance of that figure can be determined only by comparing it for a period of years and with a similar calculation for other companies in the same industry. Obviously, the return of net income on net worth will vary from one industry to another.

If the percentage of return on net worth increases, we might hasten to the conclusion that the company is showing better earning power on its net worth than the previous year, but that may not necessarily be true. If a company were to increase capital invested in assets through the sale of bonds—in other words, suppose it added five million dollars of assets through the sale of five million dollars of bonds—from the standpoint of the balance sheet we would have no change in the net worth. Its net income, however, ought to be greater because it has five million dollars more with which to work. Therefore, such an increase in the percentage of net income to net worth would not be a reflection of an increased rate of earning, but rather a reflection of the increased amount of capital upon which to operate.

For that reason we commonly use the ratio of *net income to total assets* as a check on the net-income to net-worth figure. If an increase in net income to net worth is accompanied by an increase in net income to total assets, it will probably indicate increased earning power. But if that increase of net income to net worth is not accompanied by an increase in net income to total assets, it will be because in most cases the company has had the use of additional capital. Thus, the item of net income to total assets may be used as a check against net income to net worth.

We have seen that preferred stock has an interest in the earnings prior to common stock. We measure the earnings available for preferred stock by the calculation of dollars earned per share, which is net income divided by the number of shares of preferred stock *outstanding*. Here, with a net income of \$21,479,000, and 612,000 shares of stock, we have earnings at the rate of \$35.09 per share. We call that the *amount earned per share of preferred stock*.

Again we have the problem of measuring the adequacy of the earnings

per share. Since the earnings are stated solely in terms of dollars, we must use some standard of comparison.

If a 7 per cent preferred stock of \$100 par value earns at the rate of \$10 per share, and 5 per cent preferred stock of \$100 par value earns \$10 a share, they both earn the same number of dollars per share; but certainly the 5 per cent stock shows a greater element of strength than the 7 per cent, because in the case of the 5 per cent preferred stock the requirement is \$5 and the earnings are \$10—the requirement is earned twice. In the case of the 7 per cent preferred stock, the requirement is \$7 and the earnings of \$10 do not represent the same degree of adequacy. The adequacy, therefore, of the earnings for the preferred stock is measured more appropriately by the number of times the dividend requirement is earned.

By the dividend requirement we mean the dividend on the preferred stock to which the stockholder is entitled before any dividend is paid on the common stock. In this case we have 612,000 shares. The annual dividend requirement per share is \$5. Therefore, we have an annual dividend requirement of \$3,060,000.

The net income of \$21,479,000 shown above is available for the payment of the dividend requirement on the preferred stock only after payment of the fixed charges. Those fixed charges remain relatively fixed year after year, but the income available to pay those fixed charges may change with the earning capacity. In order, therefore, to give recognition to the fact that the amount available for the payment of the dividend on the preferred stock is available only after the fixed charges have been paid, we also calculate the number of times the preferred stock dividend requirement has been earned on what we call the *over-all basis*. If we take income available for fixed charges of \$105,271,000 less taxes of \$81,996,000 and divide it by the sum of fixed charges and preferred dividend requirements, or roughly \$5,000,000, we have a figure of 4.7 times. Naturally, in making this calculation, we refer to the preferred stock dividend *requirement* rather than to the amount of dividend which may have been *declared* on the stock in case the dividend is not being paid in full. This is a 5 per cent preferred stock, and if they had paid only a 4 per cent dividend on the stock this year, we would still make our calculation of the times preferred stock dividend requirement was earned on the basis of a 5 per cent dividend.

Common stock, as we well know, has a residual claim after the payment of the fixed charges and the preferred stock dividend requirement. Here, again, we have the question of measuring the earning power of the stock. We measure that in terms of earnings per share of stock and call this the *amount earned per share*.

The amount earned per share is calculated as the net income minus the preferred stock dividend requirement divided by the number of shares of common stock. It makes no difference what dividend actually was paid on the preferred stock. If the payment is only \$4 instead of the required \$5, in calculating the income available for the common stock we must give consideration to the full preferred stock dividend requirement because, as most preferred stocks have a cumulative dividend provision, it would not be until that \$5 dividend on the preferred had been paid that any earnings would be available for distribution to the common stock.

We would have net income, therefore, of \$21,479,000, minus the preferred stock dividend requirement of \$3,060,000, divided by the number of shares of common stock outstanding, giving us the earnings per share on the common stock of \$8.94.

Let us suppose, however, that there is a deficit instead of a net income available. In that case, we add the deficit and the preferred stock dividend requirement and divide by the number of shares of common stock, which indicates the rate of earnings in a negative fashion, or at the rate of a deficit of so much per share. In such instances, of course, the sign of progress from one year to the next would be in a reduction in the deficit per share of the stock.

Another factor to which we must give consideration in the determination of the changes in the rate of earnings per share of common stock exists in the changes which may take place in the number of shares of stock outstanding. Obviously, each year the company reports the earnings per share of common stock based upon the number of shares of stock outstanding. If any change occurs in the next year in the number of shares outstanding, a comparison of the amount earned per share for those two years will not be upon the same basis. The first year will have been determined on the basis of one number of shares, and the earnings per share the second year on a different number of shares of stock.

This fact becomes particularly significant where a company, as part of its dividend policy, has paid the dividend in whole or in part in the form of stock. When we turn to the dividend policy of International Business Machines which, over a period of years, has paid a dividend partly in cash and partly in stock, we, of course, have an increase in the number of shares of stock outstanding each year. The calculation of each year's earnings per share is based on the number of shares outstanding that year. Therefore, if we seek to measure the growth in the earning power of this company, we must adjust our calculations to give recognition to the changes in the number of shares of stock.

Recognition of that change is given as follows: We are looking at the earnings this year. During the previous five years, the company has been

declaring a stock dividend as a result of which the number of shares of stock outstanding has been increasing. We see earnings of \$5 per share this year. We cannot compare that with the previous years and assume that the difference represents the increase in earning power unless and until we put the earnings in each of those years on the same basis as they are in the year under consideration. Therefore, we take the number of shares of stock outstanding this year and assume that the same number of shares of stock was outstanding in each of the previous years. Then, with the reported *net income*, we compute the earnings on a per share basis for each of those years. We are then in a position to make our comparison because we have adjusted the reported earnings of each of the previous years to a comparable per-share basis reflecting the number of shares of stock currently outstanding.

DIVIDEND POLICY

The analysis of the dividend policy of the company must be based upon the dividend record, and the analysis of that dividend record is to determine two things: First, what is the company's policy with respect to the percentage of earnings which it distributes as a dividend? And second, what is its policy with respect to the form of the dividend?

A company which has built up a strong working capital position is in a position to distribute a rather large part of its earnings as dividends. There is no particular need for the retention of a large part of the earnings. If we look at the records of General Electric and Eastman Kodak, we find that they have distributed a fairly large part of their earnings over the years because each of them has always had a strong working capital position.

On the other hand, a company which has not as yet built up a strong working capital position must, of necessity, conserve its cash and, hence, will generally follow the policy of not distributing much of its earnings in the form of dividends. We have only to look at the record of the American Can Company to see an illustration of that policy as followed by the management. That company was founded in the early 1900's and the first dividend was paid on the common stock in 1922. That does not mean that during those years the company was not earning profits. It had earnings, but it was plowing those earnings back into the company, building up its plant and equipment and working capital. Of course, in the meantime, the stockholders were not receiving dividends, but they were not suffering in that their stock was appreciating in value all the time. The company's policy on distribution of earnings as dividends was guided by its policy of building up a strong working capital and building up its plant.

The percentage of earnings which a company distributes as a dividend is shown, of course, by the ratio of the dividend to the amount earned per share. If our company pays a dividend of \$2 per share, earned at the rate of \$8.94, it is distributing 22 per cent of the earnings. It is then necessary to compare that percentage with that of previous years to determine whether it appears to be the average percentage the company follows, or whether the percentage of distribution is increasing or decreasing.

We also look at the dividend record from the standpoint of the form of the dividend. We may recall that the dividend may be paid in cash, in scrip, in stock, and in property. International Business Machines, as we have mentioned, has followed the more or less definite policy of paying part of its dividend in cash and part of it in stock. That policy is based upon its peculiar problem of leasing its machines rather than selling them. In order, therefore, to conserve its working capital to finance additional production, it cannot pay out all the earnings in cash; it pays out only in part. By the same token, in order to give its stockholders additional interest in the company, it pays a stock dividend as part of the annual dividend. Therefore, that form of dividend payment is directly related to the policy of the management and the problem of the industry.

Last we come to the *price-earnings ratio*, which is the relationship between the price at which the stock sells and the amount earned per share. This price-earnings ratio is a reflection of the rate at which the market capitalizes the earnings of the company. The theory underlying the price-earnings ratio is that the market places an appraisal upon the earning power of the company. That appraisal is based upon the degree of risk assumed by the stockholder, and the higher the degree of risk, the higher is the rate at which the market will capitalize the earnings. The lower the risk, the lower is the rate at which it will capitalize the earnings. The price, therefore, which the market gives to the stock is based upon the rate at which the earnings of the company are being capitalized. Thus, assuming an average price of \$35 per share, which we divide by earnings per share of \$8.94, we find that the market price is approximately 3.9 times the earnings, or a rate of capitalization of 25 per cent.

Of course, the market throughout the year is placing an appraisal on the value of the stock as evidenced by the daily market price. It bases this appraisal on the estimated earnings for the year. It always seeks to determine what the probable earnings for the year will be and to capitalize those anticipated or estimated earnings. Therefore, we take the price-earnings ratio for a company's stock over a period of years and use the high and the low price for each year. We strike an average which is satisfactory on the ground that the market might tend to over-

estimate earnings as well as to underestimate earnings. Throughout the year, however, it will tend to strike a good average.

Let us keep in mind that there is no one standard rate of capitalization of earnings. At times attempts have been made to set up ten times earnings and fifteen and twenty-five times earnings as a basis. We will find that each industry will tend to have its own rate of capitalization which, naturally, will be based upon the degree of risk entailed in that industry. We will also find variations between the companies in that industry due to the differences in the management or in the size of the respective companies.

PROBLEMS

The following rather simple problems are illustrative of some of the important points discussed in the foregoing material:

1. In an industrial income statement determine the net income from the following data: (,000 omitted)

Operating expenses	\$380,000
Provision for contingencies	8,000
Operating revenue	450,000
Other income	20,000
Provision for federal taxes	22,000
Fixed charges	9,000

2. Construct the balance sheet from the following data: (,000 omitted)

Current liabilities	22,926
Deferred charges	2,165
Reserves	24,702
Current assets	89,419
Capital stock	64,875
Property, plant and equipment*	66,536
Surplus	39,795
Miscellaneous assets	4,816
Miscellaneous liabilities	10,638

3. Determine the earned surplus at the end of the year from the following data:

Cash dividends paid during the year	\$3,257,748
Net income for the year	13,350,217
Earned surplus, beginning of year	26,997,173
Stock dividend paid during year	9,745,149

4. Determine the surplus at the beginning of the year from the following data:

Dividends paid during the year	\$4,487,040
Reserve no longer required against advances to subsidiaries	358,765
Surplus at end of year	12,805,935
Excess tax provision in prior years	233,506
Net income for the year	5,389,581

5. Determine for each year (a) amount earned per share of preferred and of common stock; (b) times preferred stock dividend requirement earned; and (c) cash

* Net after reserve for depreciation.

dividend paid per share on the preferred stock and on the common stock, from the following data:

	This Year	Last Year
Available for fixed charges	\$9,731,046	\$15,162,918
Fixed charges	261,115	226,442
Net income	9,469,931	14,936,476
Preferred stock:		
Number of shares	1,543,000	1,543,000
Par value	\$20	\$20
Dividend rate	7%	7%
Cash dividend paid	\$2,160,200	\$5,786,250
Common stock:		
Number of shares	3,004,362	3,004,362
Par value	None	None
Cash dividend paid	\$4,055,889	\$2,002,908

6. On the basis of the following data compute the amount earned per share of preferred and common stock:

Net income (deficit)	\$424,077
Preferred stock:	
Number of shares	47,864
Par value	\$100
Dividend rate	7%
Common stock:	
Number of shares	10,044,956

7. Adjust the following reported earnings per share to reflect the effects of stock dividends:

	Net Income		No. of Shares
	Total	Per Share	Outstanding
Two years ago	\$9,092,692	\$10.63	855,408
Last year	9,431,013	10.50	898,178
This year	9,844,633	10.44	943,028

REVIEW QUESTIONS

1. What is meant by the term "financial statements"?
2. Define: income statement, balance sheet, ratio, balance sheet ratio, income statement ratio, mixed ratios.
3. What is the significance of the income statement; the balance sheet?
4. Why is it frequently necessary to recast financial statements? In recasting, what factors must be kept in mind?
5. Distinguish between operating income and nonoperating income. Give examples of items commonly included in these categories.
6. What expenses are usually included in "operating expenses"?
7. Why is federal income tax carried as an operating expense on income statements of utilities and railroads in contrast with the practice of industrial companies?
8. Distinguish between current assets and fixed assets.
9. What assets are normally classified as current?
10. Define current assets.
11. Normally, how will the composition of current assets of an industrial company differ from that of a railroad; from that of a public utility?
12. Distinguish between funded debt and current liabilities; earned surplus and capital surplus.

13. Describe two general types of adjustments normally made to earned surplus.
14. Define a reserve; what three types of reserve are there? Give examples of each.
15. Why is the working capital position of an industrial company of greater importance than the working capital position of a railroad or utility?
16. What is meant by solvency?
17. Name four sources of working capital.
18. If a company has inadequate working capital, what methods can be employed to rectify this deficiency?
19. What is the significance of "working capital turnover"? How is it computed?
20. What is the significance of the "working capital" or "current ratio"? How is it computed?
21. Is there a standard current ratio for all industries? Explain.
22. What items generally appear on the balance sheet as current liabilities; as current assets?
23. What is the significance of "receivables turnover"? How is this ratio computed?
24. Distinguish between raw materials, work in process, finished goods inventory, and supplies. Give examples.
25. What bases are used in valuing inventory?
26. What is the significance of inventory turnover? How is it computed?
27. What is the significance of the "quick ratio"? How is it computed?
28. Define: maintenance, depreciation.
29. What three factors enter into the computation of depreciation charges?
30. Distinguish between unit rates, composite rates, and group rates of depreciation.
31. How can an analyst form an opinion as to the adequacy of depreciation charges?
32. Of what significance is the ratio of maintenance and depreciation to operating revenue?
33. What ratio is employed to test the value of fixed assets?
34. Of what significance is the ratio of net worth to total debt; net worth to net fixed assets; net fixed assets to funded debt; net working capital to funded debt?
35. For what three purposes is an income statement analyzed?
36. What information does an analysis of operating revenues or net sales over a period of years disclose? An analysis of territory served? An analysis of the industry?
37. What is the significance of the operating ratio? How is it computed?
38. Give three examples of nonoperating income.
39. Distinguish between recurring and nonrecurring nonoperating income.
40. What is the significance of the ratio "times fixed charges earned before taxes"?
41. What is the significance of the ratio of net income to net worth; net income to total assets; over-all coverage of interest and preferred dividend requirements; earnings per share of preferred stock; earnings per share of common stock?
42. What information is disclosed by an analysis of the dividend record?
43. What is the theory underlying the price-earnings ratio?

INVESTMENT YIELD

*by Dr. Harry G. Guthmann, Professor of Finance,
School of Commerce, Northwestern University*

IN CONSIDERING the matter of investment yield let us indicate at the outset of our discussion that, while we wish to a certain extent to gain a technical knowledge of this subject, we shall not be concerned with mathematical formulae as such, nor with mathematical derivations. Rather, our main objective is to achieve a practical, working bondman's point of view regarding a subject which to a great many people is somewhat mysterious. Let us dispel any possible mystery at this point by saying that the only requirements necessary to gain a working knowledge of this subject is the ability to add, subtract, divide, and find numbers in book.

CONCEPTS OF INVESTMENT RETURN

By way of introduction, let us point out that there are, in the most simple terms, two basic concepts of investment return. The more ordinary concept and the one more susceptible to accurate measurement is the *investment concept* of return. To state this concept in the most elementary way, the investor's return is what he receives each year in the form of cash whether it be dividends, interest, or rents.

On the other hand, we also have the *speculative concept* of return which takes into consideration the element of appreciation (if such appreciation occurs) in addition to income in the form of dividends, interest, or rents. A speculator purchases a security not merely because of the income which he expects to receive, but because he expects an appreciation in market value which will result in an additional return over and above the amount of the dividends, interest, or rents. (We are not considering, for the time being, the speculator whose object is to gain a profit from a decline in price by short-selling.)

We are primarily interested in the investment concept of return, since it is the more common and, as we have stated, is more susceptible to accurate measurement, and thus, a more practical tool with which to work

in the buying and selling of our merchandise, namely, investment securities. However, simply because we emphasize this concept which is mainly concerned with income, we must not overlook the element of principal appreciation which in the case of many investors provides a powerful motive toward the purchase of securities.

RELATION OF PRICE TO YIELD

Whether we are referring to bond interest or dividends on stock, the actual amount of cash which the security holder receives does not by itself tell the yield. Yield may only be determined in terms of the relationship between the price paid for the investment, or the amount of principal invested, and the income from the investment. It is a per cent relationship.

Thus, we find that a bond selling at 109 with a 3 per cent coupon due in 8 years will yield approximately 1.8 per cent. However, a 3 per cent bond due in 4 years selling at 105 will yield only 1.7 per cent. Likewise a stock selling at 75, which pays a \$3 annual dividend, is said to yield 4 per cent while the same stock selling at 100 would yield only 3 per cent.

Without discussing the mathematics involved, let us simply restate that *yield may be determined only by relating the price paid and the income received*. Either price or income of itself has no significance to us. We cannot say that a price is low or high unless we know what income is to be received. We cannot say that the income is great or small unless we consider the price paid.

We also have indicated without mentioning it directly that a third factor, maturity, enters into the determination of the yield on bonds. However, let us consider that factor at another point in this discussion and turn to the question of computing the yield on common stock.

RETURN ON COMMON STOCK

We speak of the return on common stock in terms of *dividend yield*, *current yield*, or *stock yield*. These terms have identical meanings and may be used interchangeably.

Current yield, then, is determined by *dividing the dividend by the cost or market price*. We should note that for this purpose neither the par value nor the book value of the stock is significant. Rather, the price the investor must pay for the stock constitutes the basis upon which we calculate the return.

The calculation of stock yield is, of course, extremely simple. Current yield tables are readily available, which we may employ, using the market price and the dividend as given or known factors, to find the yield by inspection. A few moments' examination should suffice to give us a work-

ing knowledge of how to use these tables. The simple process of division, however, will also give us an answer. Thus, if we have a stock selling at 36 which pays \$3, the yield will be 8.33 per cent or

3 divided by 36 = 0.0833, or 8.33 per cent.

Similarly, a stock selling at 155, paying a dividend of \$8, will have a current yield of 5.16 per cent or

8 divided by 155 = 0.0516, or 5.16 per cent.

Naturally, in computing the yield on common stock it is extremely important to think of the result in terms of *current* yield rather than *fixed* yield. This is true simply because nothing in the nature of a common stock dividend is fixed and therefore it is very likely to fluctuate. While we find in many instances that the market price is determined in terms of current yield, this is by no means true in a great many cases. We might say that there is a certain danger in the uncritical use of dividend yield in determining the value of a stock as an investment—the tendency in that event being to overlook the changing value of the dividend and the possibility of its being increased, decreased, or omitted.

As an example of the fact that the market price of a stock often reflects an anticipation of a change in dividend, let us take a bank stock which sells at a yield of 2.6 per cent. Such a yield is considerably lower than that derived from similar stocks of the same quality, consequently the price appears to be high. The low yield might in no way be an indication of an overvaluation of this stock as an investment. In fact, there might be a real possibility that this bank was about to increase its dividend, and the market, anticipating the possibility of an increased return within the foreseeable future, has bid the stock up in price, the low current yield resulting from the increased market price.

Conversely, we might find a stock selling at a high yield and therefore what appeared to be a relatively low price, the reason being that the company had been distributing regular dividends which it had not earned. Thus, the market might be anticipating a reduction in dividends.

In any discussion of the return on common stock it is important to recall that the common stockholder is the beneficiary, not only of any dividends distributed by the corporation, but of all of the earnings of the corporation whether they are distributed or not. We usually assume that, if the directors do not see fit to distribute all of the earnings to the common stockholders, it is because part or all of such earnings can be used in the business advantageously and if this is true the future value of the stock in terms of its earning power should increase. Consequently, a great deal of importance is attached to the *earnings return*, this return being the *ratio of the earnings to the cost or market price*.

Let us suppose that we have a corporation which is earning \$14 per

share, the market price of which is \$200, and the dividend \$6. The *earnings* in relation to market price would be 7 per cent, while, of course, the dividend yield is only 3 per cent. Thus, in explaining the market price of this stock the earnings per share, which should be expressed as a percentage of market price, are extremely important, as the price might seem exceedingly high if we gave attention only to the dividend. In fact, it is often necessary to study the earnings in order to explain an apparently very low yield for a common stock, and frequently we will find that high earnings in excess of actual dividends are expected to make for future value by increasing the stockholders' investment in the business and so for larger future dividends. For example, many banks currently are in exactly that position and are distributing as dividends less than half of what they earn. In this case it is not difficult to understand why the dividend yield looks very low in relation to market price. We may safely assume that the hope of the stockholder is that the undistributed earnings will compound and make for future earning power.

If we are to consider which of these two factors, dividends or earnings, usually is the more important in determining market price, we may say that in the general run of cases the usual belief is that earnings are more important than dividends. Sometimes, however, we find what seems to be an exception to this statement.

For example, at the present time the price of railroad stocks seems to be very greatly influenced by the dividends they pay rather than by their very high earnings. If we are asked for an explanation of this we might say that evidently the people in this case who are buying railroad stocks do not believe that in the future the earnings are going to be as permanent as the dividends. That is, they feel that the somewhat swollen earnings that are not being distributed as dividends and are being put back into the business may not produce as high a future increase in value as one might ordinarily expect from reinvested earnings. They simply consider that the dividend is a much better estimate of what one can hope for in the way of future income than are the earnings.

We have, then, two important criteria in the form of percentages which are useful in evaluating common stock, and we may say that these two percentages, namely, the dividend yield and the earnings return, are related to what we have called the investment concept of return.

Rather rarely studies have been made of the productivity or the return on common stocks from the speculator's point of view. In other words, these studies have taken the appreciation in price as well as dividends into consideration and, adding them together year after year, have then calculated the resultant rate of return. We must emphasize that this is a

rather unusual approach and one that we find infrequently. However, simply because we do not measure appreciation let us not ignore it. In fact we must continually remember that the possibility of appreciation is one of the important reasons why investors buy common stocks instead of preferred stocks and bonds, their hope being that there will be an increase in value in the future.

The interest in principal appreciation or capital gain is, of course, heightened by the capital-gains provision of our present Federal Income Tax law, especially in the case of those investors who have no immediate need of cash income. Under this provision the maximum tax liability on the profit from the sale of a security which has been held for more than 6 months (a long-term capital gain) is 25 per cent. We shall discuss the matter of taxation in relation to investment practices more fully at a later time.

RETURN ON PREFERRED STOCK

Before we take up the more complicated question of bond yield, it will be interesting to discuss briefly the subject of return on preferred stock.

We find that as far as preferred stock is concerned the yield is computed in exactly the same manner as the dividend yield of a common stock. That is, the dividend is divided by the market price. However, in view of the characteristics of preferred stock, we are justified in considering the result to be more in the nature of a fixed yield.

Obviously, the preferred stockholder, just as the common stockholder, is interested to some extent in the earnings per share of preferred stock. However, when we recall that earnings in excess of the dividend requirements do not accrue to the benefit of the preferred stock (except in the case of participating preferred), this factor loses its significance except in so far as these excess earnings increase the value of the common stock equity and thus indirectly strengthen the position of the preferred. Therefore, when we find reference to a preferred stock, for instance, which pays a dividend of \$5 and we are told that the earnings were \$36 per share on this preferred, we have simply an indication of the margin of safety. We might indicate this in another way by saying that the preferred dividend was earned over 7 times.

In the case of participating preferred stock, the ratio of the total earnings to number of preferred shares is likewise misleading. It is necessary in such a case to determine in terms of the provisions of the issue exactly how much the preferred will receive on its participating basis. In other words, remembering that of the excess earnings the greater part will probably go to the common stock, even under a participating arrangement, the most significant figure to the investor is the actual amount he

will receive under the participating feature and not the total number of dollars earned for all classes of stock per share of preferred.

We do have a special problem of the return on preferred stocks which have been bought at a price above the redemption price and are to be redeemed. Conversely, we have preferred stocks purchased below the redemption price. It will suffice to say at this point that our discussion of bond yields will give us some ideas in this connection. However, the effect of principal appreciation or loss due to redemption on the net return for the investor is seldom as predictable in the case of a preferred stock as in the case of a bond. Therefore, except in an instance where actual redemption is being carried out, or where it seems imminently probable, we do not take this factor into account in calculating the yield on a preferred stock, even though it will be taken into consideration by the informed investor for obvious reasons.

BOND YIELDS

The question of computing bond yields is rather more complicated than the question of computing stock yields. However, let us reiterate that no mystery is involved, and again, that we are not interested in the mathematical formulae which lie behind the comparatively simple methods we shall use to solve our problem. We shall find in this connection that most of our work has been done for us in the form of tables of bond values or yields, and it becomes purely a matter of learning the simple processes involved in using these tables and applying a certain amount of common sense and logic.

As a preliminary matter let us distinguish between *coupon rate*, *current yield*, and *net yield*.

The *coupon rate* is simply the percentage of interest based on the par value of the bond. Thus, if we refer to a 5 per cent bond or a $2\frac{1}{2}$ per cent bond we are speaking of the coupon rate, and we should remember that this represents the fixed amount of interest which the bondholder will collect each year throughout the life of the bond regardless of what he pays for the bond. Since, however, we are interested not so much in the return upon par, but rather in the return upon the investor's cost, the matter of coupon rate is of secondary importance. The coupon is, of course, one of the elements employed in determining the return upon cost.

Current yield is determined by dividing the annual coupon rate by the cost or market price. Thus, if we have a 3 per cent bond purchased at 105, the current yield will be 2.86 per cent. The concept of current yield, however, does not take into consideration the fact that there is a predictable and measurable loss at maturity in the case of a bond bought at a premium above par, and a gain or profit in the case of a bond bought at

a discount. Naturally, such gain or loss affects and modifies the net return to the holder, and current yield is therefore not an accurate measure if we are to hold such a bond until maturity.

Net yield is the total or true return to the bondholder and includes both the coupon and a proper fraction of the premium or discount which is assumed to be charged or earned each year during the life of the bond. In other words, in computing net yield we assume that the discount or a bond bought at 90 is not a special profit or gain accruing in the year the bond matures, the fact being that this gain is fully as certain and predictable as the coupon. Therefore, we distribute the discount over the life of the bond, adding a certain amount each year to the coupon in order to get our true return or net yield. Likewise, in the case of a bond purchased at 110, we distribute the premiums over the life of the bond and subtract a certain amount each year in order to determine the net yield. Such premium or discount is thus treated as cash or investment return and not as an appreciation factor.

The problem of distributing the discount or premium is another matter. It would seem that a simple method of calculating this net yield or true return would be to divide the total discount by the number of years the bond will run to maturity and add that to the coupon or, in the case of a premium, subtract it, the result being average annual income, which gives the net yield when compared to investment cost. However, should we do this, the result would be erroneous because certain compound interest factors are involved. Consequently, in order to achieve an exact solution, it is necessary either to use an elaborate mathematical formula (which we do not choose to do here) or to resort to the use of a bond value table which may be called the bondman's slide rule. Therefore, the remainder of our discussion will be devoted to the use of bond tables in connection with some of the everyday problems we shall have to solve.

NET YIELD OF A BOND WITH A DEFINITE MATURITY

It is necessary to know three things in order to determine the net yield of a bond with a definite maturity which will be redeemed at par:

1. Date of maturity.
2. Coupon rate.
3. Price.

This information will be necessary regardless of which table is in use, even though the various tables differ to some extent in construction. Ordinarily, we will find the most accessible tables consisting of one table for each coupon rate. The left-hand column will be found to contain a tabulation of net yields. The remaining columns will then contain a

tabulation of the dollar price corresponding to the net yield for maturities at intervals of 6 months, each column containing the prices for a single maturity which is indicated at its top.

As a simple problem let us compute the net yield on a 3 per cent bond due in 20 years and 6 months which was purchased at a price of 90. Turning first to the 3 per cent table, we must then find the price column for this particular maturity, in this case $20\frac{1}{2}$ years. After we have located this column we must then pick out the price, in this case 90. When we have found the price, it is merely necessary to find the net yield directly opposite the price in the left-hand, or yield column—in this case 3.70 per cent.

In practice we will find that the use of these tables is somewhat complicated by the fact that the price at which a bond actually sells cannot be found in them, simply because it would be impractical to work out tables for every conceivable price. In this case we resort to a very simple process known as *interpolation*. This involves finding the yields for the prices lying on either side of the price we wish to use and determining, on the basis of the differences involved, the net yield. A simple example based on a $3\frac{1}{2}$ per cent bond due in 23 years purchased at $114\frac{1}{2}$ follows:

Nearest prices	$\left\{ \begin{array}{l} 115.51 \\ 113.64 \end{array} \right\}$	$\left\{ \begin{array}{l} 2.60 \\ 2.70 \end{array} \right\}$	Corresponding yields
Difference	<hr/> 1.87	<hr/> 0.10	

From this we may assume that a difference of 1.87 in price within these limits will cause a difference of .10 in yield. By interpolation, the correct yield for a bond selling at $114\frac{1}{2}$ is

$$2.70 - 0.86/1.87 \times 0.10 = 2.65 \text{ (or } 2.654\text{)}.$$

Note that the price of 114.50 is 86/187 of the distance, so to speak, from 113.64 to 115.51, the difference between 113.64 and 114.50 being 0.86. The price difference of 1.87 between 113.64 and 115.51 represents a difference of 0.10 per cent in yield, therefore, 0.86/1.87 of this 0.10, which amounts to 0.046, will, when subtracted from the yield per cent of 2.70, give a yield of 2.654 or 2.65 per cent as the rate for a bond selling at 114.50.

Let us consider for a moment exactly what is involved in interpolation, which is a wonderful name for a bit of simple reasoning. We shall take an imaginary bond with an imaginary coupon rate, and so on. We take these imaginary figures because such round figures are easier to follow and understand than those we might derive from actual tables.

Given a bond with a price of 90, let us assume that we have found the table with the correct coupon rate and the correct maturity—a simple procedure. If, however, we do not find in the proper column a dollar price of 90, we must find the two prices nearest it, which we will assume to be 89.75 and 90.25—the nearest on either side. Let us then assume the corresponding yields to be 5.10 per cent and 5.00 per cent. Actually, the only problem at this point is to determine exactly where the price of 90 stands in between the two prices we find in the table and subsequently to bring that into relationship with the spread that exists between the two yields, which is 0.10 per cent. In this particular case 90 lies half-way between the two prices. Thus, we assume in interpolation that the yield will also lie halfway between the two known yields and would be 5.05 per cent. In other terms,

$$5.10 - 0.25/0.50 \times 0.10 = 5.05.$$

We will note that this equation is set up in the same manner as that used in the previous example with the exception that we have availed ourselves of round numbers. The process is identical.

If we are able to follow the logic of this process, we will have mastered the use of bond tables, although, of course, the fractions will not be as simple as those in the illustration.

Generally, the result which we obtain from use of the tables will be accurate enough for our own needs, although not exact. It would be correct to say that the accuracy of our result will vary in inverse proportion to the number of bonds, or the principal amount involved. To state this in a different way, if we are dealing in very large amounts we shall find it necessary to use tables in which the values are tabulated in as many as 6 or 7 decimal places, and in some cases we shall find it necessary to use a formula—the larger the principal amount, the larger the error as far as ordinary bond value tables are concerned.

To return to the simple matter of interpolation let us suppose that the price we have paid for this bond is 90.15 rather than 90. We again note that the total price spread in the table is 50 cents, the difference between 89.75 and 90.25. We also note that the spread between 89.75 and 90.15 is 40 cents. The spread between 90.15 and 90.25 is only 10 cents; therefore, we should understand that the resultant yield will be either 40/50, or 4/5 of the difference in yield less than the higher yield shown in table or 10/50, or 1/5 of the difference greater than the lower yield. To state these two approaches as equations,

$$\begin{aligned} 5.10 - 40/50 \times 0.10 &= 5.02, \text{ or} \\ 5.00 + 10/50 \times 0.10 &= 5.02. \end{aligned}$$

It will be advisable for every one of us to describe for ourselves and write down the method which we use in obtaining an answer from a yield table. That is, let us make up our own "formula" or procedure; and, further, let us not hesitate to describe our method in whatever terms are meaningful for ourselves. We shall find experienced persons who will be anxious and willing to give us practical help in regard to this question, and no two of them will use precisely the same terms of exposition. The main objective is to achieve *correct results* with a method that will work.

It remains for us to discuss one other form of interpolation, namely, *interpolation for time*. The problem here is based upon the fact that the tables are made up for maturities at intervals of 6 months; that is 6 months, 1 year, 1 year and 6 months, 2 years, 2 years and 6 months, and so forth. However, we shall find that we buy and sell bonds without regard to the construction of the bond tables, and the maturities with which we are concerned will fall, more often than not, within some fraction of the 6-month intervals that are given in the tables. Thus, if we are to resort to a solution by bond tables, this further interpolation is necessary. Assuming that a 4 per cent bond matures on July 1, 1961, and is purchased on March 16, 1946, at 121, the problem in computing the net yield is to determine the yield for both a 15-year maturity and a 15½-year maturity. In the next step it is necessary to interpolate between these two yields to determine the yield of a bond running 15 years, 3 months, and 15 days. The price of the bond (121) falls between the prices 121.46 and 120.06 at 15 years. The yields at these prices are 2.30 and 2.40, respectively. We obtain the following results by interpolation:

	2.30		121.46
	2.40		120.06
	<hr/>		<hr/>
Yield difference	0.10	Price difference	1.40
			121.00
			120.06
			<hr/>
Difference between market price and lower value from table			0.94
2.40 — 0.94/1.40 × 0.10 = 2.333 (yield for 15-year bond at 121).			

Similarly, for a 15½-year bond,

	2.30		122.06
	2.40		120.61
	<hr/>		<hr/>
	0.10		1.45
			121.00
			120.61
			<hr/>
			0.39
2.40 — 0.39/1.45 × 0.10 = 2.373 (yield for 15½-year bond).			

The difference in yield between a 15-year and a 15½-year bond both priced at 121, or the difference in yield which will occur in 6 months (180 days), is:

15½-year bond	2.373
15-year bond	2.333
	<hr/>
Difference 180 days	0.040

Since this bond will run 3 months and 15 days or 105 days beyond 15 years, it is clear that the yield will be

$$2.333 + 105/180 \times 0.04 = 2.36 \text{ (2.356).}$$

Before leaving the subject of determining the net yield of a bond with a definite maturity it will be interesting to consider the problem of determining the *price of a bond with a definite maturity* when the *yield is given*. This is important because in actual practice many bonds are traded, offered, or quoted on a yield basis without reference to dollar price—this is particularly true in the case of municipal bonds. The procedure in this situation is that we enter the tables with the following arguments:

1. Net yield.
2. Maturity.
3. Coupon rate.

Thus, given a 3 per cent bond with a maturity of 13 years offered on a 1.60 yield basis, we will find, by turning to the 3 per cent table and locating the yield of 1.60 in the left-hand or yield column, that the dollar price opposite this yield in the 13-year maturity column will be 116.37.

It should be clear at this point that if we have 3 of the 4 values we may, by use of the bond tables, solve for the fourth. These 4 values are:

1. Price, or cost.
2. Coupon rate.
3. Maturity.
4. Net yield.

BONDS OF OPTIONAL DURATION

We have found that many bonds are redeemable prior to maturity at the option of the issuing company. That is, depending on the terms of the issue, they may be callable at any time: on a specified date, before

a certain date, between certain dates, or on and after a stated date. Further, they may be callable at par or at a premium. Such features may have an effect on the yield of the bond concerned. For example, the net yield of a 3 per cent bond due in 20 years purchased at 112 is 2.25 per cent. If the same bond were redeemed at par in 10 years, however, the net yield would be approximately 1.69 per cent. In other words, any feature modifying the maturity of a bond will also modify its net yield.

The problem then remains of computing the yield of bonds of optional maturity. The conservative practice is to *compute the yield on the basis of the maturity which is least favorable to the holder*. This practice should most generally be followed. Thus we may state the following rules:

1. The net yield on a bond purchased at a *premium* and redeemable at par should be computed on the basis of the *shortest* optional maturity.
2. The net yield on a bond purchased at a *discount* and redeemable at par should be computed on the basis of the *longest* maturity.

For example, let us take the case of a $3\frac{1}{2}$ per cent bond purchased at 115 $\frac{1}{4}$ on January 15, 1946, due January 15, 1976, and redeemable at par on and after January 15, 1968. In this case the yield to the final maturity in 1976 is approximately 2.75 per cent. However, the yield to the optional maturity, or call date, in 1968 is only 2.58 per cent. The only certainty we have, however, is that the bond will run until at least 1968. Since beyond that point we can make no predictions as to what the actual maturity will be, we are justified only in computing the yield on the basis of the optional maturity in the case of this premium bond. Thus we follow the first rule given above, since in this case the shorter maturity results in a lower yield than does the longer maturity.

Should we purchase the same bond at 80, we should follow the second rule and compute the yield to final maturity. The yield in this case would be approximately 4.75 per cent to final maturity and approximately 5.00 per cent to the optional maturity. The reasoning here is simply that we have no justification for assuming that the bond will be redeemed prior to final maturity and, therefore, no reason to assume that we will enjoy the higher resultant yield.

Thus far we have considered only bonds redeemable at par. If, however, we have a bond *redeemable at a premium* we follow other rules but still compute the yield on the basis that is least favorable to the holder. The following rules will apply:

1. When the cost is less than or equal to the call price, net yield will be computed on the basis of the final maturity, as this will give us the lowest yield.

2. When the cost is greater than the call price, net yield will be computed on the basis of both final and optional maturities and the lower of the two yields will be said to be the net yield.

Therefore, should we have a bond due 1965-1975 with a call price of 105, we would compute the yield on the basis of the 1975 maturity if the cost price were 105 or less. However, if we purchased the same bond at a price greater than 105, we would compute the yield both for the optional maturity of 1965 and the final maturity of 1975, thus ascertaining which of the two yields is lower.

REVIEW QUESTIONS

1. Distinguish between the investment concept and the speculative concept of investment return.

2. What three factors affect investment yield?

3. How is yield computed on common stock? On preferred stock?

4. In determining the return on common stocks, should earnings return or dividend return be given the greater weight? Explain.

5. Of what significance are per-share earnings of preferred stock?

6. Distinguish between nominal, current, and effective yields.

7. Explain what is meant by interpolation in computing yields on bond tables.

8. Explain how interpolations are made of prices, maturities, coupon rates.

9. How should the yield on bonds with an optional maturity redeemable at par be computed when sold at a discount; when sold at a premium?

10. How should the yield on bonds with an optional maturity redeemable at a premium be computed when sold at a discount; when sold at a premium?

INTRODUCTION TO PUBLIC UTILITIES

by Dr. Harry G. Guthmann, *Professor of Finance,*
School of Commerce, Northwestern University

A DISTINCTION is sometimes made between *public utilities* and *public service corporations*. *Public utilities*, as the term is used in our business, excludes the steam railroads, whereas economic writers in talking about regulated public service corporations include the steam railroads.

Five kinds of businesses are commonly included in this field: electricity, gas, telephone, traction, and water. Of those five the first three are the ones of predominant interest to us. The water business has been largely taken over by municipal ownership in this country, although there are still a few privately owned water companies. When we find an occasional privately owned water company, we find that the relationships will be similar to those of utilities generally, except that they tend to have a somewhat higher investment in relation to their volume of business.

Traction also has fallen somewhat into a place of secondary interest because of the troubles of the business. Those troubles have kept the traction companies from investment popularity and, of course, in some cities, where it has been difficult to get reasonably good service because of poor earning power, the cities have taken over the traction companies. It is obvious that this might be necessary, because transportation is important for the community and to the maintenance of real estate values. For those reasons, where earning power has been poor, traction companies have gone to municipal ownership.

In this introduction, therefore, when we are talking about ratios and relationships we will understand that we are primarily concerning ourselves with the electric and gas industries, which have a great deal in common, with the exception of some differences which we shall mention. The telephone industry, being so largely a monopoly of the American Telephone & Telegraph system, is a subject by itself.

The electric and gas companies have been very important to the in-

vestment banker because they have provided much of the high-grade bond business outside of the government field in the last fifteen years. It is true that most of this financing has not been new financing; much of it has been refunding. However, there has been a very large volume of corporate financing in this field. It is only recently, with the revival of public interest and confidence in the business picture, that we have seen an increase in the importance of industrial financing.

In this field we are likely to find capital structures in which bonds are very important. Bonds are likely to constitute between 40 and 60 per cent of the capital structure, with the majority being between 45 and 55 per cent. The percentage of preferred stock might run from somewhere in the neighborhood of 20 per cent of the capital structure to nil. The common stock is likely to vary somewhere between 20 and 40 per cent. Surplus may vary from 5 per cent up to not more than around 20 per cent of the capital structure. It is clear then that we have here a business in which the typical capital structure contains a relatively high proportion of senior securities, especially in contrast to the ordinary industrial company.

BONDED DEBT AND CAPITAL STRUCTURE

We may suggest two or three different rules likely to be observed by those utility companies that desire to have their bonds enjoy the highest investment standing. It would probably be necessary to meet not merely one, but all of these rules in order to achieve genuine investment standing among the buyers who are accustomed to acquiring the better grade of securities.

The first rule suggested is that bonded debt shall not exceed 60 per cent of the capital structure; although actually in practice, this rule is somewhat less emphasized than are the second and third rules. At the present time most electric utilities would be able to meet this requirement. However, it is interesting to notice that while this is true, the Securities and Exchange Commission, through its regulation of public utilities holding companies, has tended to press that figure lower, and that there is an apparent tendency on the part of utility companies to bring their debt more nearly to the level of 50 per cent of the capital structure.

BONDED DEBT AND FIXED PROPERTY

Another relationship commonly set up for debt limitation is based on the percentage of fixed property represented by bonded debt. This relationship has a great deal of similarity to the relationship between capital structure and bonded debt.

Let us take the typical balance sheet of a public utility. We shall

expect to find that the bulk of the balance sheet values under the liabilities side consists of bonds, preferred stock, if any, and common stock equity. Current debt will constitute a relatively small item. When we turn to the assets side, we shall expect to find the bulk of the balance sheet values in the fixed assets. In fact, we are likely to have 10 per cent or less of the assets current, and often the current liabilities are almost enough to offset the current assets. The current liabilities may be anywhere from 5 to 8 units as against 10 units of current assets, as a low current ratio is not regarded as being particularly hazardous in this business. Sometimes we find electric companies that have had current ratios as low as one to one, and yet there was little question as to their solvency.

With those facts in mind, let us suppose that we have a balance sheet consisting of current assets, \$10,000,000; fixed assets, \$90,000,000; and current liabilities, \$5,000,000; the capital structure will, roughly, equal \$95,000,000. Therefore, if we compare bonded debt both with capital structure and with fixed assets we are comparing with very similar bases. In this particular situation we would have a slightly larger divisor if we compared with capital structure than if we compared with fixed assets; so if the bonds were limited to 50 per cent of the capital structure, the maximum would be \$47,500,000. If we limit them to 50 per cent of fixed assets, the maximum would be \$45,000,000.

The reader will note that we have not mentioned depreciation. Since the implication is that the depreciation reserve, instead of being treated as a liability, is an offset or deduction, we assume that the fixed assets are stated less any reserve for depreciation—and we might point out that there is a strong tendency at the present time in the utility field to shift that reserve over to the asset side. A few years ago it was almost the invariable custom to put the depreciation reserve over on the liabilities side between capital structure and current liabilities.

The question now arises, if one is going to limit the debt to a percentage of the fixed operating assets, what basis should one use, the gross or the net assets? Gross assets will be before depreciation; net, after the reserve for depreciation. The general feeling is that we should use the net basis, and the reasoning is that it is the property, after subtracting depreciation, upon which you are allowed to earn a fair return as a regulated business. Therefore, if the custom is to allow only a fair return on the investment after allowing for depreciation, there is no particular sense in relating the debt to something which is gross and which does not allow for that depreciation.

Some people, however, still compare the debt with the gross plant. The argument for so doing is that the gross plant is a measure of the

capacity to deliver service, the point being that a plant that is depreciated 10 or 20 per cent has just as much kilowatt capacity as one which is absolutely new.

Certainly there is much to be said for the common practice of comparing funded debt with property rather than with capital structure. The reason for this is that as long as we compare with capital structure, the tendency is to forget to look at the assets to determine what is actually supporting the capital structure. If we compare funded debt with the property, there is no possibility of misconception. For example, some utilities might have, in addition to the fixed operating plant, investments and other fixed assets which are not subject to the mortgage. Therefore, there is a distinct advantage in relating the bonded debt to the assets which are actually pledged and which, ordinarily, are operating plants.

There is another point in this connection. In recent years the utilities have been obliged to analyze their assets, and if it is determined that there is any writeup, they have been required to state that writeup in the balance sheet as an item called *intangibles*. Since this item is not allowed as an investment upon which a return may be earned, it should not be considered as an asset supporting the bonds outstanding.

Therefore, we should relate the bonded debt to fixed assets that are capable of producing earnings. A scrutiny of the assets side in relation to the bonds is a simple way of making certain we are limiting the debt to what it should be limited to, namely, a percentage of the mortgaged property that is in useful form, the generally accepted limit being 60 per cent.

LIMITS ON NEW DEBT

We will note that in some of the prospectuses for public utility bond issues, there is often a statement that the corporation will be permitted to issue new bonds for new property up to a percentage which may run as high as 75 per cent. It should be pointed out that this is considered to be an emergency maximum rather than the expected future practice of the company. In this manner the company is given a degree of latitude in the event that financial difficulties require a higher proportion of funded debt. Therefore, we would expect the company to pursue much the same policy that it did in keeping the debt down to the lower percentage. This provision merely provides for a special situation such as the necessity, let us say, for financing in a depression or an emergency.

As a matter of fact, this percentage limitation in the bond indenture is tending to go to lower and lower levels. If we go back to the open-end provision of the first mortgage bonds of the old Chicago Railways Company, we find that they permitted the issuance of new bonds up to 100

per cent of the value of any new properties. The company actually utilized that provision, and the only thing that kept the funded debt from going to 100 per cent was the fact that they already had property to start with which kept the debt from getting up to 100 per cent on the overall basis.

Another point is that, even if we have a provision that seems rather generous, should a company attempt to create debt unwisely under that provision, we have the protection of the regulatory commission. To a certain extent, we rely on the commission to see that the general policy is not to create debt up to the full limit unless absolutely necessary. Of course, if a corporation has some kind of debt retirement program, as a number of corporations now have, there will always be a tendency for its old debt to fall as a percentage and thus to prevent the overall debt ratio from rising too high. In this connection, it may be said that the present character of public utility managements is such that the observance of intended limitations is generally assured.

COVERAGE OF FIXED CHARGES

Very important also, of course, is the matter of coverage of interest charges, since probably more investors pay attention to interest coverage than to the balance sheet relationships. Most of the text books, which tend to lag behind current practice, suggest a minimum coverage of two times. As a practical matter, with the fall of interest rates there is a tendency to expect a higher coverage than that among institutional buyers. In fact, under present conditions it is possible for a very good company to meet a standard of $2\frac{3}{4}$ to 3 times without too much difficulty.

For example, if a utility has 50 per cent of its capital structure in bonds and 50 per cent in stocks and surplus and is only obliged to pay 3 per cent on its debt, it is clear that for every \$100 of investment the fixed charges will be \$1.50. If this utility, then, were to earn 4.5 per cent on its total capital structure, it will show interest coverage of three times over. Earnings of 4.5 per cent are lower than we characteristically find for a reasonably well directed, efficiently operated utility property, and today the typical utility hopes to earn from 5 to 5.5 per cent. Therefore, we are justified in expecting that fixed charges be earned more than two times in terms of current interest rates.

CHARACTERISTICS OF UTILITY BONDS

The bonded debt of the typical electric utility will generally consist of a single first mortgage open-end issue of long maturity, running from 20 to 35 years. In contrast to the railroads, which customarily have several layers of debt, we find that the electric companies seldom issue second mortgage obligations. From time to time, we do find small debenture

issues in addition to the first mortgage, usually in cases where the company has had to create debt in excess of the conventional limits, the objective being to retire the debenture issue in order to achieve a simple capital structure conforming to accepted standards. Occasionally we find small mortgage issues of an underlying character which have been assumed by the parent company in the course of acquiring existing properties. In the majority of cases these assumed issues have been called and refunded, and those that are still in existence are for the most part noncallable.

The open-end feature characteristic of these issues has meant that as a company issues its bonds it frequently does so in several series under the same mortgage. Thus, we often have bonds that are designated as *Series A*, *Series B*, *Series C*, and so forth. In fact, when we find bonds that are designated in this manner it is generally an indication that they are part of an open-end issue. The exceptions to this are the railroad equipment trust obligations which are lettered in this manner, each trust, however, being completely independent as to security. The security for the various series of an open-end mortgage is, of course, the same.

PROTECTIVE PROVISIONS

As to the protective provisions ordinarily included in the indenture, the tendency is for them to become more and more uniform. As we have occasion to study the various prospectuses, we shall note how frequently they seem to include identical provisions. This is partly due to the influence of the market, as provisions which are found to satisfy the requirements of the market tend to become adopted as a matter of practice. It is also due to the force of regulation as expressed by the various regulatory bodies.

The two most common provisions are those which limit the debt in relation to fixed operating assets and in relation to earnings. We have touched briefly on the limitation in relation to property and noted that commonly the company is limited in the creation of new debt to 75 per cent of the value of any property acquired. It is suggested that the reader consult an appropriate prospectus for the purpose of becoming familiar with the manner in which this provision is stated. Certainly, as has been indicated, the intention is that the company not utilize this provision for the purpose of increasing total debt beyond the customary maximum of 50 per cent of the total property unless absolutely necessary.

It is also suggested that the student familiarize himself with the manner in which the limitation on the creation of debt in relation to earnings is stated. Generally, the company is permitted to create new debt to the extent that the earnings in the years previous to the financing equal one

and three-fourths times the interest charges, including the interest on the new debt. It is probable that in terms of present interest rates this provision is not entirely adequate. However, it does allow the company a certain amount of latitude in the case of necessity. It is important to note that in defining earnings for this purpose, nonrecurring and extraordinary income should be excluded and that in some cases it is desirable to exclude nonoperating income from investments. Provisions may also be included requiring the company to make adequate allowances for depreciation and maintenance.

The sinking fund, which was discussed in an earlier section, is the exception rather than the rule in the utility field. It is possible, however, that we may see a tendency to include a sinking fund provision in the indenture in the future.

With regard to the *after-acquired* clause, we should note that this is a very common feature also; and since the corporation has the right to issue additional bonds, it is only right that they should give this protection to the investor, which requires that every additional piece of property acquired will be pledged under the existing mortgage. The after-acquired clause, then, is a concession to the investor. The open-end feature is a benefit to the corporation.

UTILITY DEBENTURES

We have mentioned the fact that some of the utilities have seen fit to put a small portion of their debt into debenture form. At the present time there are two important advantages in this. One advantage is that it permits a company to finance by means of bonds without increasing their mortgage bonds to a level where the interest rate would be increased due to the lowered quality of the issue. For example, if we have a funded debt comprised of \$50 of first mortgage bonds and \$5 of debentures in each \$100 of capital structure, it is possible, by thus limiting the mortgage obligation to 50 per cent of the capital structure, to obtain an interest rate on that mortgage debt that is in line with the highest grade issues—providing the other factors contributing to high quality are present. If the entire debt were included in one large mortgage issue constituting 55 per cent of the capital structure, it is probable that the interest rate would be fractionally higher. It is clear, then, that an interest saving on the great bulk of the debt could more than offset the cost of the small debenture issue.

The second advantage, obtaining currently, is that by setting up such a debenture on a short-term serial basis the interest costs may be lower even than the rate borne by the mortgage issue. Since, when we do find a debenture issue it is usually the intention to provide for its early retire-

ment, it is obvious that this advantage gives added attraction to this convenient method of retiring excessive debt.

A less customary way of eliminating the excess of debt over what is considered to be a conservative standard for first mortgage debt is found in the Commonwealth Edison case where, instead of issuing first mortgage and serials, first mortgage and convertible debenture bonds were issued. In this case the debenture bonds were rather long term and the company paid a relatively higher rate than it did on the mortgage debt because of that longer maturity. The convertible feature was included not merely to sell the issue but because the management evidently wanted to develop a simple capital structure of all common stock and first mortgage bonds—about 50 per cent common stock and about 50 per cent first mortgage bonds. It so happens that this is being accomplished. As time has passed, earnings and dividends have risen and the block of convertible debentures has gradually been changed over into common stock until now only a relatively small part of the original issue remains unconverted.

USE OF PREFERRED STOCK

Electric utility companies have frequently used preferred stock in addition to bonds, one of the reasons for so doing being the lower cost of a preferred stock as compared with a common stock. Obviously, before issuing a preferred we would issue bonds up to the appropriate limit, since the cost of funds obtained in this manner is less than the cost of funds obtained through the issuance of preferred stock. Currently we expect the highest grade preferred in this field to yield somewhere in the neighborhood of 3.5 per cent, the majority of the high-grade preferreds yielding around 4 per cent with yields running as high as 5 per cent on the lower grade issues. While some of the companies issued preferred stocks during the 1920's at rates of 6 and 7 per cent, these have for the most part been refinanced at lower rates where it has been possible to do so.

Another reason for the use of preferred stock is that this type of security enables the issuer to tap an investment market that could not be reached with bonds or common stock. In other words, there is an individual market the needs of which lie somewhere in between the low yields obtainable on high-grade bonds and the higher but less stable return on common stocks. It is this need that a preferred stock is presumed to satisfy. This was a particularly important factor in the period of the 1920's when utilities were making their greatest growth and consequently had the maximum problem of raising the money to finance this rapid growth.

A third reason for the use of preferred stock is that funds may be ob-

tained in this manner without endangering the control of the common stockholders. Undoubtedly this will be a factor of diminishing importance in the future. By issuing nonvoting preferred, it was possible to concentrate all the voting power in a small common stock issue; and so, during the 1920's particularly, promoters who were interested in utility systems were especially interested in maximizing debt and preferred stock in order to minimize the necessary investment in common. In such cases, the common stock was put into a holding company, the financial problem of the holding company being thus minimized as it expanded.

While it is difficult to prescribe definite limits on the issuance of preferred stock, since no definite standards seem to exist, it has been suggested that earnings in ordinary years should equal 1.5 times the combined fixed charges and preferred dividend requirement. It is probable that in terms of current interest rates this coverage should be somewhat larger. It has also been suggested that the common stock investment should at least equal the preferred, unless the funded debt is unusually low. This is more or less in line with the viewpoint of certain regulatory bodies that have indicated a capital structure of 50 per cent bonds, 25 per cent preferred, and 25 per cent common stock as being appropriate for utility companies.

At this point in our discussion it is undoubtedly clear to the student that trading on the equity is practiced to a high degree in the public utility field. The leverage that is provided by the relatively large proportion of senior securities has contributed greatly to the attractiveness of the common stocks of these companies. While regulation has tended to limit the over-all return on the investment, the percentage of that return available to the common stocks after the requirements of the prior securities is, generally speaking, quite adequate and greater than if a higher percentage of the typical capital structure had consisted of common stock.

REGULATION

Among the special factors which must be considered in any approach to an understanding of utilities, perhaps the most important is the matter of regulation. We may say, briefly, that regulation of public utilities is conducted primarily by state commissions in all but the state of Mississippi, such regulation being more effective in some states than in others.

The powers of the regulatory bodies vary widely, but among those generally included, perhaps the most important regulatory function is in connection with establishing the rates that may be charged and the quality of service that must be rendered.

Another matter over which the regulatory bodies have jurisdiction has

to do with the accounting practices of the utilities. It may be said that regulation in this direction has become increasingly effective over the years. The fact that we have such excellent financial information about these companies is due, to a great extent, to the uniform accounting systems developed and required by the commissions.

A third important item included in the regulatory powers is the power to approve or disapprove the issuance of securities or changes in capital structure. Naturally, the approval of a security issue by a commission does not in any sense guarantee its quality. It does mean that some checks have been made on it and it does serve to protect the public to some extent. However, regulatory authority cannot be substituted for good judgment and good management, although management has been greatly limited in this particular field.

Finally, we find regulation as to the right to operate. Before a utility can operate in a new territory, it ordinarily will be obliged to obtain a certificate of convenience or a certificate of necessity from the state body. This is done to prevent competition and unnecessary duplication of facilities.

In addition to the certificate of convenience, which is typically issued by the commission, it is also necessary to obtain a franchise either from the state or the municipalities in which the utility desires to operate. A franchise is simply a contract between the public and a corporation. On the basis of this contract the corporation gains the right to use the public property as necessary for its operations and in accordance with the terms of the franchise. In consideration for the privileges granted, the company agrees to provide and maintain service and in some cases agrees to make certain payments to the governmental unit concerned.

We shall not discuss the franchise in detail; however, we should note that the matter of franchises is ordinarily given considerable attention in prospectuses and offering circulars because of its importance to the investor. Conservative investors who accept a very low return feel that it is important that they be protected in this regard especially as pertaining to the length of time the franchise has to run. In the event of a franchise running for a limited time, there is always the problem of renegotiating the franchise at its expiration. Frequently this is disadvantageous to the company, since the prerogative lies with the municipality as far as the terms which may be imposed are concerned. Obviously, the nature of the property is such that it cannot be utilized elsewhere in the event that the terms are not satisfactory.

A solution to this problem has been found in the *terminable or indeterminate franchise* that has been used increasingly in recent years. In effect its use enables the franchised company to operate just as long as

the rates and the service provided are satisfactory and adequate. From the standpoint of the investor, given a stable political situation in the community involved, such a franchise should most generally be considered adequate.

We may say that usually where we have good service and where the community is satisfied with the service and the rates, the matter of franchises is not a subject for emphasis. In situations where serious political differences have arisen in connection with the company's operation, or where there is considerable agitation, the matter of the franchise is of extreme importance.

FEDERAL REGULATION

We have in the past thought of the bulk of the regulation of utilities as coming from the state level, but in recent years, particularly the last decade, we have seen more regulation coming from the federal level. All of the things which we have mentioned as being subject to regulation, with the possible exception of the franchise, are within the scope of state regulation. We shall find that Moody's has a table showing the various points of regulation in each state which may be consulted in case of need. However, since it is the federal regulation that offers the most novelty, we shall outline some of the things that are of most interest to us in our business.

We probably hear more of the Securities Exchange Commission in this connection than any other body. The SEC enters the utility picture in two ways.

The first way is in connection with the registration of new securities and, of course, with regard to that we do not need to elaborate because the problem is exactly the same for utilities as for any corporation that is seeking to sell a new issue that, under the terms of the law, has to be registered with the Commission. Of course, we know that the chief reason for that requirement is to be sure that the corporation gives full and adequate disclosure of all of the material facts the investor should have available. Because of the fact that the utilities are required to maintain and file uniform accounts and reports, it is relatively easy for them to assemble the information necessary for registration. There are some types of information peculiar to the industry, however, regarding which they must be particularly careful to give full disclosure; such things, for example, as the matter of franchise, litigation, questions that are up for regulation before the commission which might be embarrassing to earnings at some future time. All of those are important for a complete statement of the situation.

The other way in which the SEC enters the picture is through the

Public Utility Holding Company Act of 1935. The chief reason that federal regulation was necessary at the holding company level was that, unlike the operating company, the holding company is purely a financial organization. Since it dealt with and held securities in corporations scattered, in some cases, all over the United States, the holding companies were beyond the reach of state regulations. The act, then, was an attempt to bring these companies under regulation, leaving the state commissions to care for the problems of the local operating companies. It should be noted that this act does not cover all kinds of holding companies but merely those that are in the electric and gas fields. Then too, it only covers holding company systems that are in more than one state. Therefore, if the utility system is purely an intrastate affair, let us say within the state of New York, it does not come under this rule.

Probably the provision of this act that gets the most attention from people in our field is the provision known as the *death sentence*, which provides that a holding company system must shear off and give up properties which are not a part of a single integrated system. The theory behind this is that the financial and engineering advantages which the holding company can give are not important enough to be preserved and that the real advantages are not likely to be great unless there is a physical interconnection of the operating properties.

Many arguments support and oppose the death sentence. However, it is obvious to anybody who studies the history of the public utility holding company that one of the most important advantages which it offered was the assistance in meeting financial problems which an isolated company or a system that was located far from a financial center might not have been able to handle. Furthermore, a holding company may render various legal and engineering services to its subsidiaries, whether integrated or not, more economically than they could obtain them from outside sources. Whether this is sufficient justification for the continuation of holding companies on other than an integrated basis more or less depends upon one's point of view.

The commission itself has shown a tendency not to press the matter of immediate dissolution until it could do it in such a way that it would be to the best interests of the operating companies. By that we mean that they have given many of the operating companies an opportunity to achieve a reasonably good and sound capital structure before separating them from their systems. Once the operating companies have a sound capital structure and have enough earnings so that they can again carry out the retirement of any excess of prior obligations, the feeling is that they are in good enough shape to be set up on an independent basis.

The general tendency then is to insist that the holding company shear

off all its properties except those included in an integrated system of contiguous properties. Once that is done, there is little likelihood that it will be necessary to emphasize the other provision which was designed to eliminate unnecessary layers of holding companies. For example, we might have a holding company at the top which owns the common stock of another holding company. The latter holding company, in turn, might hold another holding company, and so forth, until we get to the operating company. In the past we might have found as many as nine layers of companies. Under the death sentence provision, it is intended to eliminate all of the intermediate layers until there is one holding company with operating companies immediately beneath it.

Of course, those who believe in private enterprise, and who feel that the arrangements should be carried out in such a way as to provide the best service to the public and the greatest safety to the investor, are quite willing to agree that there were very serious abuses on the part of many of the holding companies. The hope is that in the administration of the death sentence the act will not be applied in such a manner that these companies become too small because, after all, a certain amount of size is desirable in order to achieve the best management results.

We might mention that, in the case of an operating company that holds the stock of other operating companies, we are dealing with something that is not primarily a holding company. We are dealing, rather, with something that is primarily an operating company, such as the Commonwealth Edison Company. It would seem that it is not the intention of the act to cover that type of situation. It is its intention rather to cover the pure holding company. Also, generally when we have a situation of the sort we have described, we are likely to have a company which has its subsidiaries in the same state and which for that reason would not come under the act.

The second federal body with which we should be familiar is the Federal Power Commission which for some years has had certain authority over any water power projects developed on navigable streams or streams which would affect the flow of a navigable stream. In other words, the Federal Power Commission has had a great deal of influence on everything in the way of water power development that has been constructed since its creation.

More recently, the Commission has been given authority to regulate rates where power is being transmitted across state lines. With the growth of interconnected systems, such movement of power has expanded, and the Federal Power Commission has developed an important place in the regulatory picture. Furthermore, the Commission has had

considerable influence independently and through its work with state commissions in developing uniform accounting procedures.

Two other government bodies that we frequently encounter and ought to remember, we shall not discuss at this point, namely, the Federal Communications Commission, which is important in the field of telephone and radio, and the Interstate Commerce Commission, in which we are interested in connection with railroads and bus operations.

FAIR RETURN ON FAIR VALUE

Probably the most important regulatory problem from the point of view of those who are interested in investment is the problem of fair return—the problem of what earnings the operating utility will be allowed.

We hear a great deal about the concept of fair return; in reality it is a mixture or a combination of two factors: first, the fair rate which may be earned, and second, the fair value upon which this rate may be earned. Therefore, in order to discuss this problem, one has to know first, something about what the regulatory body deems to be a fair percentage of return upon the investment of a utility, and second, what valuation methods will be employed to determine the value of that investment.

Let us take up first the question of what constitutes fair value from the point of view of a regulatory body. In the past, this whole subject was extremely confused. All kinds of methods were supposed to be at least considered in arriving at fair value, but there was no clear-cut single method. In fact, in one of the early Supreme Court cases it was stated that consideration should be given to original cost, to depreciation, to reproduction value, and to all of the other factors. The question then was what weight should be given to these various items. We find that this doctrine did not offer a solution to the problem.

THEORIES OF VALUATION

A tendency has been developing in the last few years to say that the whole weight of regulation lies in the direction of primary emphasis on the *original cost* to the people who first built the property with allowance for depreciation since that time. The other prominent theory, which was given considerable attention in the past, is that fair value should be based on the *replacement* or *reproduction cost* of the property.

From the point of view of the commission, and on the basis of logical argument, it would seem that we could put forward a fairly strong case for replacement or reproduction value. This argument might base itself generally on the premise that the cost of building a property, let us say, fifteen years ago is not important. The important consideration should be the investment necessary for another company to provide service at

current price levels. If the price level has gone up, the company should be allowed to earn a return on this increased base. On the other hand, if prices have gone down it is unfair to make the public pay a return on a price basis which is historically all right but which does not mean anything today. Some people have pressed the point further and have shown that as the property gets older it sometimes becomes harder and harder to go back and trace its real cost. However, in spite of those two arguments there has been less and less interest in this theory of valuation.

What are the arguments, then, for using original cost modified by allowances for depreciation? One of the main arguments is that it is much easier from an administrative point of view to regulate a utility on an original cost basis. Let us note that if we use replacement cost, it may take an extended period of time to make an adequate survey of a very large company's property, during which period further fluctuations in prices might occur. In addition, it is possible to have wide differences of opinion among competent persons in establishing replacement value. In other words, the presence of a number of variable factors makes the establishment of such a valuation extremely difficult. From the standpoint of eliminating these confusions and areas of disagreement, the original cost basis at least provides an exact and definite base.

In addition, the original cost basis of valuation offers certain advantages for the holders of prior securities and less of a disadvantage for the common stockholder than would appear to be the case.

As has been indicated, of every \$100 in utility property, most of the investment comes not from the common stockholders, but from holders of senior securities, either bonds or preferred. Substantially half of the investment is contributed by bondholders, and anywhere up to an additional 25 per cent may be contributed by preferred stockholders, both groups having a fixed claim. To insist that the fair value behind these claims be the reproduction value, which will fluctuate with fluctuations in the price level, would result in insecurity for these prior security holders. Therefore, the original cost basis is actually advantageous to these investors.

As far as common stockholders are concerned, let us suppose that we have a capital structure made up of 50 per cent bonds—20 per cent preferred, and 30 per cent common. In the event of a break such as occurred in 1933, when the whole price level dropped roughly 33 per cent, the presumption is that the value of the property would drop correspondingly, allowing only for the one factor of a drop in the average price level. Obviously, if we are to reduce the value of the property by one third, the common stock equity is in this case wiped out. Therefore,

the application of reproduction value is a distinct disadvantage to the common stock during periods of declining prices and shrinking values.

The real complaint of the common stockholder against original cost usually arises during a period of rising prices when the desire is to realize profit from an increase in values. The senior security holders (if reproduction value is used as a base) are affected by a general rise in the price level only to the extent that the base is broadened, the security is somewhat increased, and presumably earnings coverage is improved. Any increase in the valuation would actually contribute only to an appreciation in the value of the common. If a 50 per cent rise in price level were reflected in a 50 per cent increase in valuation of the property, this would represent an increase in the value of the common stock equity of 167 per cent (if the common stock is 30 per cent of the capital structure).

Thus, the use of replacement value would have the effect of creating widely fluctuating speculative trends for the common and of doing little for the senior securities other than to affect them adversely during periods of declining prices. For this reason, among others, we are inclined to feel that we are moving in the general direction of abandoning this concept of replacement or reproduction value.

The main reason we cannot entirely eliminate this idea, in spite of what regulatory commissions are doing, is that we have to consider what might happen in the future. If we had a considerable degree of inflation there might possibly be a strong movement attempting to increase the present valuation of the public utilities on the ground that the holders of public utility common stocks should have opportunities for appreciation comparable to the holders of common stocks in industrial corporations. However, it is still possible, by increasing the rate of return, to compensate the common stockholder for any inequities that could possibly arise from the unrestricted use of just one measure of fair value, namely, original cost less depreciation.

FAIR RETURN

Turning now to the question of what is a fair return on the fair value, the usual statement made is that a fair return is a return that is high enough to induce capital to come into the business. Therefore, it may vary from time to time. During the 1920's the figure commonly used was in the neighborhood of 7 per cent on the total investment. As interest rates and the cost of capital went down in the following years, there was a tendency for that figure to sag, until now we think of 5 to 5½ per cent as a sufficient return to permit the utility to attract the capital necessary for development.

We might suggest, as a way of analyzing this problem, that we might

break down the problem of financing and ask: what do we need to pay in order to get the different parts of the capital needed from the different segments of the investment market?

Let us suppose that we felt that ideally the utility should work toward using nothing but bonds and common-stock and that the bonded debt ought not to be more than 50 per cent. In such a capital structure of 50 per cent bonds and 50 per cent common stock equity, what is it necessary to pay in order to get each kind of capital? For the answer, of course, it is necessary to refer to the particular situation, since we cannot say there is one rate for all companies. For example, it is relatively easy to sell the bonds of a large company such as Commonwealth Edison, which has enjoyed a good reputation and is widely known. And in this connection let us remember that it is not just the net yield to the investor, it is the total cost that the company has to pay, which takes into consideration the fact that when a company raises a dollar of capital it has to pay a part of that for selling the issue.

Let us assume that our company can obtain that part of its capital derived from the issuance of bonds at a cost of 3 per cent, or \$1.50 for each \$50 of its capital. Since the balance of the capital is to be derived from the issuance of common stock, the cost of that capital is more difficult to ascertain; but for the sake of illustration let us say that it will be necessary to pay as much as 8 per cent, or \$4 for each \$50 of common stock. The total cost, then, is \$5.50 for \$100 or 5½ per cent on the whole investment, and this should be the minimum return allowed.

Now, of course, the figure of 8 per cent at the present time might well be more than is necessary for a conservatively financed utility. If that were true, we would substitute a different figure, let us say 6 per cent. Likewise, if we had a smaller utility located in an area where it is harder to raise capital, we might use a capital structure consisting of more bonds, more preferred, and less common. Then we would apply the proper rates against it.

It would seem that this is a practical approach to the problem, although we will probably not find it stated in these terms in any of the textbooks. We are not saying that rates arrived at by other methods are not correct, but merely that there is no good way of explaining how these rates are determined unless reasoning along these lines is employed. Very often the practical man does jump to a final conclusion that is entirely correct without going through these steps in building up his results.

It should be made clear that when we speak of fair return we speak of fair return *after* taxes. Therefore, from the point of view of regulation, income taxes must be thought of as a kind of expense of doing business. The rates allowed should take this expense into consideration, because it

is only after we have something over and above taxes that we have the means of paying the investors for the capital they have put into the business. That point we shall come back to, because it is quite significant when we compare the operations of the private utility with the publicly owned utility.

Meanwhile, two further points are rather important for a practical understanding of this business of regulation.

The first point we ought to consider is that this return cannot be thought of as a return that is guaranteed to the public utility by government. It is possible that we could have a utility which under almost any imaginable conditions could not earn a fair return regardless of any action the commission might take. In other words, a utility might be in such a position that if it raised the rates in order to give it more net income it might drive away business, and under those conditions very little benefit would be derived from any attempts to raise rates. We also have situations such as are illustrated by the traction business in some communities. In other words, the automobile has taken away business, and there is not sufficient volume of business, with any reasonable fares that could be charged, to pay operating expenses and still provide a return. Another factor which might interfere with the company's ability to earn a fair return is the effect of population shifts. If the company lost its customers because of migration from one section to another or because the chief industry left the area of its operations, it is obvious that the company's earnings might be permanently affected. In addition, the effects of recurring business cycles are continually felt. Therefore, it is very important to understand this point. We too often fall into the habit of feeling that the utility, because it has this fair-return theory behind it, is always going to be guaranteed a fair return, which is clearly not the case.

A point that is closely related to this is that some persons, who are on the regulatory side, have recently suggested that fair return ought not to be something that is tailored to give every utility exactly the same rate of return, since this eliminates any incentive for the utility to operate efficiently. For that reason it was suggested that some weight be given to the ability of the utility to keep its costs and prices low in relation to those of other utility companies. In this sense, the utility that is doing a relatively good job ought to be allowed more than a fair return in the strictest sense. Under those conditions it might earn a rather nice return on its common stock equity, more than enough to justify the investment. However, another utility located in another community which has not been as alert and efficient might be denied the rates sufficient to give it a

full fair return on the investment, and consequently would have an incentive to increase its efficiency.

This idea has not yet been widely accepted, but, while it may not be stated in these terms, it is possible that it will gain wider favor. The idea, in other words, is that in setting rates for a utility we ought to give consideration not only to the matter of fair return but also to fairness to the consumer when we compare what he is paying to what other consumers are paying in similar types of communities. Should this idea enter into regulatory practices there will, of course, be important implications for the analyst and the investor. The difficulty in applying this idea is that different communities may have different operating conditions, and therefore it might be reasonable to charge one rate in one community and another rate in another community. It might be necessary to charge more in one community than another simply because whoever serves it will find it necessary to stand higher costs because of the location, the wage scale, and other factors.

GOVERNMENT COMPETITION

The second big problem that we ought to familiarize ourselves with is the problem of government ownership and government competition in the utility field. If the government pursued a strictly logical attitude it would remember that monopoly has come to be regarded as the normal thing in this field in order to produce the lowest cost of operation and the best service to the consumer, and, therefore, it would not contemplate entering into competition. If the government insists upon entering this field, we should say that it ought always, in the interests of observing this rule, buy out the utility rather than start competition with it. The fact that it has not always done so indicates that political considerations rather than pure economic considerations are involved.

Of course, the possibility of government competition is peculiarly dangerous from the point of view of the investor in this field because of the fixed nature of the investment in plant. A merchant can sell his merchandise or move it elsewhere because of its very nature, but when we have our investment fixed in plant and equipment that cannot be taken up and placed elsewhere, we are at a decided disadvantage. Under such circumstances, also, there are considerable fixed costs, and, therefore, if somebody comes in and takes away a part of our business we suffer more severely than if our costs were mostly variable.

Another important factor is that the governmental operator or competitor has some very decided advantages. That is particularly true in the case of a hydroelectric property as compared with an ordinary steam electric plant. One distinct advantage to the government or municipal operator is the lower cost at which capital funds may be obtained. This

is due not only to the lower interest rates available to the government unit but also to the fact that a certain part of the private utility's capital consists of equity capital which increases the over-all cost of its funds. As we have pointed out, the cost of funds is a major factor in the utility business, and especially so in the case of a hydroelectric plant where the investment in plant is extremely high in relation to the volume of sales. Obviously, where a high proportion of the operating revenue is devoted to paying a return on invested capital, a small saving in the cost of that capital is an extremely important factor.

The publicly owned utilities also have an important advantage in connection with taxes, since they are not subject to many of the taxes which the private company must pay. Since taxes amounted to approximately 20 per cent of the gross revenues of the electric utilities in 1944, it is apparent that the elimination of no more than half of those taxes would give the publicly owned company a large advantage over the competitor that is burdened with the full tax load. It is interesting to note that a reduction of rates by a utility operated by a government unit when based on its freedom from taxes is merely a shifting of the tax burden from the consumer of the service to some other tax source. It does not represent efficiency on the part of the utility nor does it represent a real saving to the community.

When we are dealing with water-power projects we find that the government has another important advantage, and that is the fact that the government, in developing water-power projects, can achieve a number of purposes at the same time. In the Tennessee Valley Authority project, for example, the government not merely was developing power, but it was interested in preventing floods. In such a situation it is possible to attribute a part of the costs to each project. At the time the Tennessee Valley Authority project was being developed, one of the matters for debate between those who wanted it and those who were opposed was on the question of how much of the costs of that investment ought to be attributed to flood control and how much to electricity. Obviously, the allocation of a substantial part of the cost to flood control would enable the power project to show a very excellent return upon the investment in the electric portion of the project.

Usually the debates on this matter of cost are inconclusive because it is almost impossible to get the contestants to agree as to where costs should be allocated in a joint cost project. However, it can readily be seen that the opportunity to develop hydroelectric power in conjunction with other projects presents the government with an advantage the private company does not enjoy. The question, of course, is whether the

auxiliary purposes in a project of this sort are economically warranted and whether adequate costs are charged to the power development.

Before leaving this subject and in order to emphasize the magnitude of the advantage which a government unit may have in competition with a private utility, let us make a theoretical comparison. The figures we shall use are selected purely for purposes of illustration and are not representative of any particular company. They are useful, however, in illustrating the two major points of difference, the lower cost of capital and the possible freedom from taxes characteristic of the governmental utility.

Let us suppose that we have a property valued at \$5,000,000 with annual gross revenues of \$1,000,000 and operating expenses, excluding taxes, of \$525,000. A comparison may be worked out as follows:

	<i>Private</i>	<i>Municipal</i>	<i>Difference</i>
Operating revenue	\$1,000,000	\$1,000,000	
Operating expense	525,000	525,000	
Taxes	200,000	75,000	\$125,000
Cost of capital funds	275,000(5½%)	125,000(2½%)	150,000
Balance	—	275,000	275,000

In this illustration we have assumed the taxes of the private company to be 20 per cent of the gross, and have arbitrarily set operating expenses at \$525,000 in order to get a net return on the investment of 5.5 per cent. We have assumed the operating expenses to be the same in both cases, and we have arbitrarily taken a round figure of \$75,000 for the taxes of the municipal utility. In some cases the municipal utility might pay no taxes at all, and in others it might pay substantial taxes, as frequently such a unit may pay local taxes or may make a contribution in lieu of local taxes which amounts roughly to the same thing. For our purposes we have assumed the private company to have a tax disadvantage of \$125,000.

As to the cost of the capital invested in the municipal utility, we have assumed a rate of 2.5 per cent. If the federal government were to borrow at the present time, the long-term capital presumably would cost 2.5 per cent. If a local community were borrowing it could possibly obtain funds at a slightly lower rate. However, on a 2.5 per cent basis, the funds are obtained for \$150,000 less than the same amount can be obtained by the private company, assuming that the private company pays an over-all return of 5.5 per cent on the total investment.

The total advantage which this municipal utility has amounts to \$275,000, or 27.5 per cent of its gross revenues. Since, presumably, our rates are determined by our costs, including the cost of capital, it would

be possible, theoretically, for the municipality to cut its rates by 27.5 per cent. Obviously, this would constitute a tremendous competitive advantage over the private company.

It should be pointed out that in no sense are we arguing in support of public ownership of utilities or, for that matter, in support of private ownership. That is not a matter for discussion in this book. It is true that we have pointed out certain advantages which accrue to the government utility which do not accrue to the private company and that apparently these advantages should enable the government-owned utility to serve the consumer at lower rates. In fact, the private companies have made, in many cases, a much better showing in this regard than one would normally expect, considering the factors that we have mentioned. In some cases the publicly owned utilities have made a poorer showing than one might expect. The point that we wish to make here is that as investors it is necessary to take these differences into consideration in comparing the records of private utilities with publicly owned utilities. Further, it is important that the investor in a private company realize the danger to his investment in the form of government competition.

Let us, then, summarize these differences so that in any future discussion we may be familiar with the factors, which, unless recognized, make any comparison between municipal or governmental units and privately owned operating utilities unfair. The basis of advantage to the publicly operated utility lies in the following:

1. Lower cost of capital.
 - a. Tax exemption if municipal bonds are used.
 - b. The debt may be supported by government credit.
 - c. Use of 100 per cent debt instead of debt and stock.
2. Lower taxes.

It should be clear from the foregoing that it is somewhat ridiculous to speak of a municipal project or a federal project as providing a yardstick for private operation, which was one of the arguments for the Tennessee Valley Authority. The two items of difference in the cost of capital and difference in taxes should destroy the effectiveness of that argument. This is especially true since government ownership shows to the best advantage in the field of hydroelectric power where these two items represent the bulk of the charges against gross revenues.

RATIO OF PLANT TO OPERATING REVENUE

The analysis of public utility securities is discussed in considerable detail in chapter 6 of this book. However, by way of introduction we shall point out a few of the matters that would ordinarily be emphasized for analytical purposes in contrast to other types of securities.

One item to be noted is the property turnover ratio, or ratio of plant to operating revenue, which is expressed in a way somewhat different from that of an industrial company. The sales of the industrial company normally exceed the amount of investment in plant and property. For that reason we divide the sales by the property and determine the number of times the property has turned over. In the case of the utility, however, the operating revenues are always less than the property. Thus it is customary to divide the property by the operating revenue. This gives us the number of dollars invested in plant for each dollar of revenue. For example, if we have plant and property of \$20,000,000 and operating revenue of \$5,000,000, we would have a ratio of plant to revenue of 4 to 1, or \$4 of plant for each \$1 of revenue.

This ratio, which may be computed either for gross plant or net plant, provides a standard of comparison between companies as well as a means of establishing the trend of a company. Obviously, the lower the ratio of plant to operating revenue the more desirable it is from the investor's standpoint.

DEPRECIATION AND MAINTENANCE

Other items that receive a great deal of attention from those who study utilities are maintenance and depreciation. Depreciation, of course, is given the most attention, and the theory is that depreciation is subject to the control of management. Actually, there is considerable uniformity in the electric utility industry.

It is customary to study depreciation with respect to gross operating revenue; at the present time there seems to be a common feeling that depreciation should run somewhere around 11 per cent of the gross. This percentage has risen in recent years, partly as a result of pressure by regulatory bodies and partly because of the desire on the part of management to improve credit standing.

It is also customary to compare depreciation with gross plant. During the war years it was impossible for the utilities to make expenditures for replacements and improvements, but afterward the depreciation reserve began to constitute a relatively high percentage of gross plant.

Depreciation, of course, is based in this case upon the over-all property. For that reason we might say that it is quite possible that different companies might have different relationships and still have perfectly satisfactory ratios. We shall discuss this more in detail, but we might note here that the depreciation, which is the result of the company's expectancy as to the length of life of the property, can be varied within some limits by the amount of upkeep which the property is being given. As a

result, there is a feeling that the two items, maintenance and depreciation, ought to be studied together.

Maintenance represents the current expenditures that are required and made in the way of cash outlay for repairs in order to keep the property in shape. Depreciation, on the other hand, is not a cash expenditure. In effect, it represents a writedown of the property because of its loss in value over the years. However, many items of plant never actually wear out, but could be maintained indefinitely if it were not for the factor of *obsolescence*. In fact, some operators state that a large proportion of retirements that are made are not the result of wearing out, that is, ordinary depreciation, but the result of obsolescence. For that reason the depreciation figure that we find is really in effect a compromise, an attempt to make an allowance both for wearing out and for obsolescence. In this field, however, we never speak of it as obsolescence, but merely refer to it as depreciation.

We insist upon adequate depreciation in order to prevent the overstatement of net earnings. In addition, we wish to be certain that costs are stated correctly so that, when we come to the matter of establishing rates, we will get a rate that is high enough not only to cover our cash expenses but also this noncash item of depreciation. Let us note that the company that depreciates its property and recovers its principal from its customers by charging enough to cover this depreciation allowance is, in some cases, thereby able to reduce the amount of securities upon which it will have to earn a return. Therefore, if a company has written down at least 25 per cent of its property and actually has collected that from its customers, it has that 25 per cent either to retire securities or make a new investment, and the result is that it has to earn a return only on 75 per cent of the original capital.

NET INCOME AVAILABLE FOR INTEREST AND DIVIDENDS

Another percentage which is very useful to notice in studying a utility situation is the percentage of gross revenue which is left, after all expenses and charges, for the particular security one is studying. If one is studying the debt, one may take the net income available for interest and determine how large a percentage it is in relation to the gross revenue. If one is interested in the common stock, one might take the net percentage of gross left for common stock after interest and preferred dividends.

Why is it that this percentage has value in an analysis? Let us suppose that we had two bond issues both of which showed a coverage of two times. However, we find that one utility had 80 per cent in expenses, which come ahead of interest, and the other had 90 per cent, so that only 20 per cent of gross was available for interest in utility No. 1,

and only 10 per cent was available for interest in utility No. 2. For the sake of illustration, we are ignoring the question of income tax.

The point we wish to make is that even though both have the same coverage they are not equally good bonds, since a shrinkage in gross revenue would have a more pronounced effect on the bond of utility No. 2. For example, suppose we have a similar decline in both utilities of 5 per cent in gross revenue. In the first case we have wiped out only one fourth of the amount available for interest, and the coverage is still 1.50; but in the second case we have wiped out one half of the amount available, and we have a coverage of only one. If the loss of gross was without any compensating decline in expenses and the amount of loss was 10 per cent, the first company would still show a coverage of one while the second company would have nothing for interest. We usually do not lose gross without having some decline in expenses, but we do not normally expect a drop in expenses that is in direct proportion to the loss in gross revenue. Furthermore, if we have a rising expense level, we have exactly the same situation. For example, if expenses increase to the extent of taking 5 per cent or more additional of the gross, the result is identical.

In this connection, of course, we are interested in the operating ratio, which is the percentage of gross operating revenue represented by operating expenses, the balance being gross income available for interest and dividends. While this ratio is one measure of the efficiency of the company, it is perhaps of more interest to the investor for the reason we have previously discussed; namely, the operating ratio determines the amount available to satisfy the security holders.

The matter of capital structure, we have already mentioned. Obviously, it is an important consideration for the analyst. And while there are many relationships other than the ones we have mentioned, these seem to be of importance, especially by way of introduction, and should provide helpful points of emphasis in approaching a more detailed analysis.

In addition, there are the nonstatistical or background factors having to do with the type of business, the territory served, population trends, rate structures, management, public relations, franchises, regulation, and other related matters, all of which must be considered by the analyst. We merely mention them at this point, as they are discussed fully and concretely in the following chapter.

DEVELOPMENTS SINCE 1937

By way of concluding this very brief introduction we shall consider a set of figures made up from reports of the Federal Power Commission,

and tabulated below. In interpreting these figures let us remember that they are based on the period from 1937 to 1944. 1944 is, of course, a war year, and for that reason it cannot be assumed that these figures will necessarily be representative of ordinary times. They do, however, show some things in the way of change which are worth noticing.

The following figures, taken as of 1944, indicate changes that have occurred in the electric utilities since 1937:

KWH sales	+ 82%
Generating capacity	+ 24%
Revenues	+ 44%
Customers	+ 17%
Depreciation reserve	+ 90%

	1937	1944
Gross plant/revenues	5.47	4.08
Net plant/revenues	4.88	3.30
Gross income/capitalization	5.8% *	6.01%
Interest charge coverage	2.97	3.64
High-grade bond yield	4.03%	2.96%

* Average 1937-1944.

Since 1937 the number of kilowatt-hours sold, which is the measure of the volume of power sold, has increased 82 per cent. It is interesting to note that the utilities have been able to do this with an increase in generating capacity of only 24 per cent. Of course, the utilities were unable to carry out new construction during the war period, and this probably is an important reason that generating capacity was not increased more. However, a factor of considerable importance in this connection is the fact that the round-the-clock operation of industry made possible a greater and more constant utilization of the existing plants, eliminating the daily peaks and lows characteristic of electric loads in ordinary times.

The reason we mention this is that many people have the feeling that the utilities will benefit in the way of increased earnings with the elimination of the excess profits tax. However, it would seem improbable that the utilities will enjoy such a high degree of utilization in the future and that any substantial increase in consumption due to a growth in industry or domestic customers will require an increase in generating capacity with a corresponding reduction in return due to less efficient utilization.

The revenues of electric utilities have increased 44 per cent as against the increase in kilowatt-hour sales of 82 per cent. The indication here is that the great increase in sales was in the sale of power to industrial consumers, in which case it is clear that the revenues did not increase in direct proportion to the volume of power sales. This is further reflected in the fact that the number of consumers only increased 17 per cent com-

pared with an 82 per cent increase in kilowatt-hour sales, indicating that the majority of new customers were large industrial consumers.

Figures further indicate that the electric utilities eliminated \$800,000,000 of what was called inflation, meaning asset value that did not represent initial cost and which was regarded as improper under current accounting procedure, but which may very well have represented cost from the point of view of the corporation when it purchased the property. The reserve for depreciation increased some 90 per cent during this period, or about \$1,300,000,000, which would indicate that the industry is in a healthy condition in this respect.

Various relationships are shown in the illustration, two of which are the relationship of gross plant to revenue and that of net plant to revenue. The first figure fell from 5.47 to 4.08, which is a marked change. This means that in 1937, which was a good business year, the average electric utility, whose figures were included in the Federal Power Commission reports, had \$5.50 of gross plant on its books for every dollar of revenue. By 1944 this had dropped to only \$4.00 of gross plant for each dollar of revenue, an improvement of more than 20 per cent.

The figure for net plant is, of course, gross plant minus depreciation. Therefore, in view of the increase in depreciation reserve, we would expect this ratio to drop lower and lower in relation to the gross plant figure. In 1937 it was slightly less than \$5.00 of net plant in relation to each dollar of sales, which by 1944 had been cut down to \$3.30. The advantage to the corporation in having a very low investment in plant in relation to the volume of sales is, of course, that the cost of the capital that is used is reduced. In this case there is a very substantial decrease from 4.48 to 3.30, which is a reduction of almost one fourth, meaning that as a whole the electric utility industry would need only three fourths as much net income out of each dollar of revenue to pay a fair return on the invested capital as it did in 1937.

The next figure is gross income to capitalization. Gross income should not be confused with gross revenue. Gross revenue consists of total sales, whereas gross income is usually the term applied to the net amount available from all sources to pay a return on capitalization, that is, the amount available for interest and dividends. It should be ascertained, however, in each individual case whether reference is made to gross income before income taxes or after income taxes. In this case it happens to be the amount available after income taxes. The average for the period 1937 to 1944 was 5.8 per cent; and since the gross income to capitalization in 1944 is 6.01 per cent, it is clear that the high volume of business made it possible for the electric utilities actually to increase that net figure slightly

over the average in spite of the increased taxes and other problems of the war period.

The remaining figures show interest charge coverage to be slightly under three times in 1937, increasing to 3.64 times in 1944. This change undoubtedly reflects, to some extent, a reduction in funded debt as well as a refunding with lower interest rates. While it is possible that interest charge coverage of 3.64 is rather high for the bulk of companies in this field, it must be remembered that we are dealing with an average figure, which we cannot accept as entirely representative without knowing how it is computed. In other words, in constructing this average the fine showing of a few large, successful companies might outweigh the poor showing of a larger number of smaller and less successful companies.

The figure showing the average yield on high-grade electric utility bonds, which decreased from 4.03 per cent in 1937 to 2.96 per cent in 1944, of course reflects the drop which has occurred in interest rates generally. It is probable that this figure is somewhat lower currently.

REVIEW QUESTIONS

1. What kinds of businesses are commonly classified as public utilities?
2. For utility bonds to enjoy a high investment standing, what are the generally accepted limits in:
 - (a) Ratio of bonded debt to capital structure?
 - (b) Ratio of new debt to new property additions?
 - (c) Ratio of bonded debt to fixed assets capable of producing earnings?
 - (d) Coverage of fixed charges?
3. State in detail the two most common provisions of an indenture for limiting the debt in relation to fixed assets and in relation to earnings.
4. What is meant by the term "after-acquired clause," and who benefits from its use?
5. What is meant by an "open-end" mortgage, and who benefits most by its use?
6. What advantages may accrue to a utility by including a small proportion of its debt as debentures rather than having all the debt in mortgage bonds?
7. What advantages may accrue to a utility by issuing a preferred stock as a medium of financing?
8. For a utility preferred stock to enjoy a high investment standing, what are the generally accepted limits in:
 - (a) Times fixed charges and preferred dividends earned?
 - (b) Ratio of preferred stock to common stock equity?
9. What powers are commonly exercised by state public utility regulatory bodies?
10. In what two main ways does the SEC exercise control over public utilities?
11. What are the principal provisions of the so-called "death sentence" clause of the Public Utility Holding Company Act of 1935?
12. What regulatory authority affecting public utilities is exercised by the Federal Power Commission; by the Federal Communications Commission; by the Interstate Commerce Commission?

13. In valuing public utility property to determine the basis for a fair return on investment, what are the arguments in favor of using original cost, reproduction or replacement cost? Which basis is more commonly used?

14. What factors should be considered in determining a fair return to a public utility on its producing property?

15. What advantages do publicly owned utilities enjoy over privately owned ones?

16. What are some of the significant operating developments of public utilities over the past ten years that would be reflected in a statistical analysis?

ANALYSIS OF PUBLIC UTILITY SECURITIES

*by Dr. Thatcher C. Jones, Professor of Finance,
Graduate School of Business Administration,
New York University*

PUBLIC UTILITIES are connected in a peculiar way with the public interest, and because of that fact, the public is directly concerned with the operation of the utilities, the type of service they render, its dependability, and the rates charged for that service. This being so, in the interests of the public the utilities are subjected to special regulation.

Thus we have in the various states, and also in the federal government, special bodies that have been created for the specific purpose of regulating the operations of the public utilities within the states and also in interstate operations.

The effect of this regulation has been to bring about a uniformity which facilitates analysis of these companies, already characterized by a high degree of similarity due to the very nature of their operations.

ANALYTICAL PROCEDURE

Undoubtedly, there are as many analytical procedures applied to public utilities as there are analysts. However, the following broad outline is suggested, and needless to say, it can be modified to suit the ideas of the individual analyst.

1. Nonfinancial aspects:
 - a. Territory:
 - (1) Location.
 - (2) Population.
 - (3) Resources.
 - b. Management.
 - c. Franchises.
 - d. Rates.
 - e. Regulation.
 - f. History of business.
 - g. Property.
 - h. Operating data.
2. Financial aspects:
 - a. Balance sheet.

- b. Income statement.
- c. Ratio study.
- d. Security values.

ANALYTICAL TOOLS

The beginning of our discussion has to do with a brief consideration of the analytical tools. This list is not intended to be all-inclusive. It is merely suggested as indicating some of the guides that might be used by the utility analyst in attempting to draw some conclusions relative to the investment quality of public utility securities.

First, we have the maps of the territory served, which help the analyst to orient himself with regard to the company, its field of operations, and the possibilities for expansion based on the characteristics, economic and financial, of that territory. We must always keep in mind that a utility must look for its success directly and exclusively to the territory served. Unlike industrial enterprises, it cannot draw upon the public at large on a nation-wide or an international basis. Therefore, the analyst must remember that a clear understanding of the potentialities of the territory is essential to an effective appraisal of the future success of the company and the quality of its securities. Closely allied, of course, with the map, there would be an analysis of the territory served, which subject we shall go into shortly.

Another tool or source of dependable information would be the annual reports of the company, supplemented during the year by interim reports and, occasionally, news releases. These reports, for the most part, are authentic, and they emanate from the officials who are supposed to know the details of the company.

The registration statement is available when the company does any public financing. These statements, as we are aware, are submitted to the Securities and Exchange Commission and, in a sense, consist of a formal application to the Commission to permit the utility to offer its securities to the public. All the details of significance relative to the company are contained in the registration statement. The analyst and the general public may have access to the registration statement by application to the Securities and Exchange Commission and may get photostatic copies upon the payment of the necessary fees.

The prospectus is a summary or *résumé* of the important material contained in the registration statement, and for practical purposes, at least, it very largely fulfils the requirements relative to information about the company that may not be found elsewhere.

The Stock Exchange listing bulletins have been a good source of information if the company's securities are listed. They are not quite so

detailed as the prospectus and should not be recommended over the prospectus. But if there has not been any new financing, they may be used in lieu of the prospectus. The listing bulletins are available from the inception of the company's listing on the Exchange, and for supplemental listings, up to the present time. They may be had or examined at the New York Stock Exchange library. Of course, these are now historical records, for the most part.

Another source of information would be the reports of the governmental agencies which have to do with the regulation of utilities: the Securities and Exchange Commission, the Federal Power Commission, the Federal Communications Commission, and, also, the public utility commissions of the various states. These reports are sometimes presented in great detail, and if there has been any special investigation of the company, for any reason whatsoever, such information is oftentimes presented in clear and understandable form, which sometimes is valuable to the analyst who is making an extensive study of the company.

Of course, we are all familiar with the financial services, such as Moody's, Standard and Poor's, and Fitch's, which reproduce the financial statement and also give some of the other salient information in surprisingly accurate form. Mistakes do appear in these services, but when we consider the enormous amount of work and statistical data presented in those volumes it is surprising that the errors are so few. For the most part, the analyst can rely on the information contained in these services.

Interviews are another important source of information. It is a good idea for the analyst, after he has made a rather careful study of the company and has become generally familiar with it, to contact the management to clarify any points that seem to be in doubt and also to form a personal appraisal of the management at first hand. The management sometimes will be in a position to furnish information that has not been published, or to supplement it with greater details.

It is our purpose to discuss the nonfinancial aspects of the analysis and then, in subsequent discussions, to discuss the financial aspects. It is appropriate to say that the various headings indicated in the outline above are not intended to be exclusive; they are largely suggestive, and may be added to or, in a few cases, probably treated lightly, as the circumstances seem to warrant.

A. THE BOSTON EDISON COMPANY AND THE DETROIT EDISON COMPANY

TERRITORY SERVED

Let us first consider, then, the territory served. We have taken for illustrative purposes two companies which are fairly comparable in many

respects: the Boston Edison Company and the Detroit Edison Company. The thought is not exactly to make comparisons of these two companies, but to show to a degree those comparisons, in a sense contrasts, which help us to broaden our perspective and give us a broad approach to the possible factors to be considered.

Let us first consider Boston Edison in relation to the territory served. This company operates in Boston and the immediate vicinity. It takes care of the industrial and residential area, excluding Charlestown and probably one or two other small areas. It operates within a radius of about thirty miles. It serves the consumers of this territory with electrical energy without competition. While its charter, from that viewpoint, is not entirely exclusive, in practice it does operate without competition. In addition to serving the area mentioned above, it serves at wholesale about ten electric companies and municipalities. The population of the territory is about 1,350,000.

It is a good idea, when analyzing a territory, to consider the dynamics of that territory, because the success of the company, to repeat, is dependent upon that territory. It would be desirable to make a statistical comparison of the population trend of several cities and, also, of the United States, with that of the territory served by Boston Edison.

Merely for the decade 1930 to 1940 the population in the United States increased 7.2 per cent. In Boston it decreased 2.5 per cent. In Chicago the increase was 0.6 per cent; in Detroit, 3.4 per cent; in Los Angeles, 22.4 per cent; in New York, 7.5 per cent. There was a decrease in Philadelphia of 1 per cent.

If we were to study the trend of the population over the period from 1890 to 1940, we would observe that the growth in Boston was comparatively small. For example, back in 1890 it had 448,000 population, as compared with 771,000 in 1940. Detroit, in 1890, had only 206,000 population, whereas in 1940 it had 1,623,000. Comparable figures for Los Angeles are more astounding still. In 1890 Los Angeles had only 50,000 population, whereas in 1940 it had 1,540,000. This gives us an indication of the dynamics of the territory.

Of course, this is historical, and we must not draw hasty conclusions relative to the population trend because of the past record. It is necessary, in analyzing a territory, to see the possibilities of the future, if that is practicable. An area may grow rapidly because of the introduction of new industries, or the development, after discovery, of natural resources, or because of climatic conditions. Or, again, its growth might be due to the untiring, imaginative efforts of various commercial clubs in the city promoting the city by effective advertising. All of these are factors that

should be kept in mind in forecasting what is going to happen to a territory and, therefore, to the public utilities in that territory.

The density of population sometimes is worth considering, also. Boston, in this respect, ranks among the highest. Population per square mile is about 17,800. In Chicago it is 16,700; in Detroit, 11,400; in Los Angeles, only 2,200; in New York, 23,200; and in Philadelphia, 15,200. The reason we are interested in the density of population is because of the bearing it has on the cost of the service and the possibilities for revenue in the territory. The cost of installation is higher per mile, naturally, where the density is great. But, on the other hand, the revenues are also much higher per mile. The possibilities for increase are less where there is a high degree of density than where there is a possibility for intensive development in a territory, where it is sparsely settled. Neither is entirely an unmixed advantage or disadvantage. There are advantages in a dense population and there are disadvantages, a condition that applies probably more to some other types of utilities than to the electrical and power industry. The gas industry is probably a better example.

The next factor to keep in mind in studying the territory has to do with resources and the development of industries in the area. The most dependable source for this information would be government reports, and the United States Bureau of the Census gives the most dependable figures in this respect. On the basis of the 1940 census report, wage earners in Boston numbered 237,000; in Detroit, 311,000; in Chicago, 484,000; in Los Angeles, 126,000; in New York, 850,000; and in Philadelphia, 322,000.

As far as the annual value of the products is concerned, Boston produced \$1,425,000,000; Detroit, \$2,719,000,000; Chicago, \$4,278,000,000; Los Angeles, \$1,219,000,000; New York, \$6,948,000,000; and Philadelphia, \$2,293,000,000. We will observe, then, from the viewpoint of manufacturing, that both Boston and Detroit rank high, but that Detroit's production is virtually twice that of Boston. It would be helpful if we were to study the trend of this growth over a period of years.

Closely allied with the manufactures of the territory would be resources, particularly the natural resources. What are the prospects of these resources contributing to the development of the territory?

Boston is not very well situated from that point of view. It is, in a sense, isolated. Long shipments of fuel, of practically all of the raw materials which would be used in the manufacturing processes, and even of a substantial part necessary to support the population, are necessary. Therefore, from the viewpoint of competition with other areas more strategically situated, with respect to raw materials, Boston is in an inferior position. Indeed, we know that some of the industries have tended to move out of New England, particularly the textile industry, and have

been transplanted, in part at least, in some of the Southern states, where there is a closer proximity to the raw materials and possibly a more desirable climate.

Detroit is a little better situated in that respect than is Boston. It is closer to the sources of the raw materials needed in the various types of industries that are particularly popular in that area: coal, fuel and iron ores in the steel industry. Also, it is more strategically situated from the viewpoint of markets, being near to the industrial center of the United States and not too far removed from the population center.

MANAGEMENT

Our next general subject is management. Generally speaking, the managements are very efficient, and certainly, from the viewpoint of engineering efficiency, there is little to be desired in that respect. The technical staffs are well trained. They are cutting down constantly on various cost items, and the reductions are largely passed on to the customers. The financial management, particularly in recent years, has been on a high plane, thanks to the efforts of the management of the companies and also to the very splendid advice they received from our large investment banking institutions, who worked with them and helped them in formulating financial plans so as not to handicap their future financing and to keep a proper balance between bonds and stocks, that they might not get into financial difficulties in the future.

It is only fair to say, also, that the regulatory bodies have made a contribution in that respect.

The best test of a management is performance. Certainly, from the viewpoint of the investor, that is the ultimate criterion. If that is the case, then, we would look to the financial statements, and in an analysis of the financial statements we would keep in mind not only the results of the immediate past but also the trend of developments over the years. One management, compared with another, may seem at a great disadvantage at a particular moment of time, because comparatively the results may not look as good. It may be that the management that seems to be less efficient has inherited a lot of difficulties and problems from a previous management, or that the very nature of the territory served creates problems for the management. In making comparisons we cannot take a company too far out of its environment and place an onus on the management, without taking into consideration all the factors involved.

We shall not say more about the managements of either Boston Edison or Detroit Edison, other than the general observations that have already been made, that these companies, together with most of the leading com-

panies at the present time, do have efficient managements. However, if it is desirable to go into that subject more in detail, there are a few sources that might be used. Probably *Who's Who in America* would give some of the background of the management. *Who's Who in Finance, Directory of Directors*, may also be used in addition to personal interviews when feasible.

FRANCHISES

Let us turn next to a consideration of franchises. We shall not devote much time to discussing the various types of franchises, although there are four or five types that might be considered. One is known as the license. Another one is the perpetual franchise. Another is one that is limited in time. Another one that is popular today is the terminable or indeterminate franchise.

In the New England area many of the franchises are of the so-called license type. In most other areas they are not of that type. In the case of Boston Edison, its charter is unlimited in time. It grants to the company the right to engage in the production and sale of electricity, steam, and also water in that area. And, based on this franchise, it also is given the privilege of building transmission and distribution lines.

In order to get permission to operate in a municipality, it has to contact directly the municipality served. We may recall that the right to regulate utilities is a state right, but in many cases the state gives to the municipality the right to regulate the operations of the utility within the city or the municipality. In any event, the municipality gives its consent or withholds it. If for any reason the utility does not like the rulings or findings of the municipality, as in the case of the Boston Edison, it may appeal to the jurisdiction of the Department of Public Utilities of the state. The ultimate power resides not in the municipality but in the state.

Under its charter, Boston Edison is protected against competition to some extent, at least. That is, if any of the towns served by the company were to permit any other company to come in and serve, Boston Edison, if aggrieved, would have a right to appeal to the Department of Public Utilities of the state of Massachusetts to set aside the action of the municipality. The municipality itself could not act without submitting the proposition to public referendum in the territory. In that way a formal vote of the citizens is required, and even after that the municipal decision is subject to review and even nullification by the Department of Public Utilities. In this way, the company's properties and its franchises are rather well protected.

Broadly speaking, the New England states have, for the most part, done a better job in protecting the assets of the public service companies

than is generally true throughout the United States. They have not opposed a reasonable return on the capital, but they have at all times insisted on a review of any proposed capital change to be sure that there was a reason for the issuance of the securities. When these have once been issued, it has been the viewpoint, very largely, that the investor should get a fair return on that capital which has been authorized. Obviously, the existence of such an attitude is of prime interest to the investor, since the attitudes of regulatory bodies have, in some instances, been unreasonably harsh.

REGULATION AND RATES

The company operates under the jurisdiction of the Department of Public Utilities, which jurisdiction includes supervision over rates, types of service, capitalization, standards, accounting, and other items having to do with the generation, transmission, and distribution of electrical energy. The rendering of steam service, however, does not come under this same regulation. It comes under that of the municipality proper.

The matter of rates is always a bone of contention between the company, on the one hand, and the regulatory bodies on the other. There appears to be a conflict of interest, the utility trying to obtain as large a return as possible on its capital investment, and the regulatory body, on the other hand, attempting to obtain from the utility as high a standard of service as possible at the lowest reasonable cost to the customer. Theoretically, the one thinks in terms of private gain and the other in terms of public protection.

An enlightened management would conclude that the company's best interests could be served most effectively by keeping in mind the public interest, so that there is a close coordination and close relationship between the quality of the service rendered, on the one hand, and the charges therefor, on the other.

Some people are of the opinion that rate reductions are an unmixed evil, of disadvantage to the company. Possibly the experience of the companies in the United States would not justify that conclusion. It can be clearly demonstrated that over the years the companies that reduced their rates consistently, as costs decreased, have shown a higher degree of stability of income and their securities have been of higher investment quality than has been true of companies that tried to avoid rate reductions at all times. Experience will also show that as rates are reduced usage increases, and that, if the rate reductions are not too drastic, the reduction in rate will soon be compensated for by increased usage resulting, not in a net decrease in profits to the company, but possibly in an increase. In any event, a high degree of stability is achieved.

The best managements do not object, really, to rate reductions if the reductions are reasonable, and by reasonable we mean that they are not too large at any one time. It is much better, from the viewpoint of the company, to have a series of modest reductions than to have spasmodically large reductions, because the company can take up the slack in the former case, but it may operate at substantial declines, if not losses, immediately following a large rate reduction. As analysts, then, we should not be unduly alarmed because of rate reductions.

The electric rates in the territory served are uniform and the *block system* is utilized. The rates in this area are considerably above the national average because of the high cost of transportation of fuel into this section. The *block system* of rates is based on a sliding scale of charges, the rates decreasing as the volume increases. For instance, in the case of Boston, for the first twenty kilowatt-hours per month the rate is six cents per kilowatt-hour. It is five cents for the next sixty kilowatt-hours, then it is three cents per kilowatt-hour for all in excess of eighty kilowatt-hours. If we were to assume that we had the usage of 100 kilowatt-hours per month, we would find our bill to be \$4.80 on that basis. In the case of Detroit Edison, whose rates are somewhat lower, for 100 kilowatt-hours per month usage, the Detroit customer's bill would be \$3.65, as compared with \$4.80 for Boston Edison.

Rates were reduced in Boston on February 14, 1946, to become effective on March 1. The biggest reduction was from six and one-half cents per kilowatt-hour for the first twenty kilowatt-hours to six cents. That resulted in a saving to about 395,000 customers of \$1,200,000 a year. Of course, if the company could not offset that reduction in some way, it would have an important bearing on the earnings of the company.

In the rates there is always a provision for fuel costs. It is known as the *fuel clause*. So if coal costs over \$6 a ton, there is a coal charge added to the bill of the customer to compensate the company for the costs above \$6 a ton. The utility commission establishes rates—or approves rates is a better way to put it—and it is not an easy thing to have those rates changed, even downward. It takes time. It necessitates public hearings, and so on. A considerable time, therefore, could elapse between an increase in fuel costs and a change in the rates. Therefore, we have this elastic provision known as the *fuel clause*. This applies to both Boston Edison rates and Detroit Edison rates.

COMPANY HISTORY

Let us turn now to the history of the company. Of necessity, this is brief. Most of the stress should be based on future expectations since the investor gets little or no income return out of past performance. The

surplus ordinarily is not large enough to take care of extended periods of operating losses. Hence, if the company meets with reverses, at least so far as the stockholder is concerned, there probably would be no income, nor could it pay interest to the bondholders indefinitely. Therefore, we use the historical approach only as a guide to help us in formulating our opinion as to future expectations. If we were to visualize a down-trend in the company's earnings from this point on, we would not be inclined to buy its securities, no matter what its past performance was.

This company was organized in 1886 as the Edison Illuminating Company of Boston. Its name was changed in 1937 to the present title of Boston Edison Company. Since its formation, it has acquired about twenty-one companies and their properties in the Boston area. The company is engaged in the manufacturing, purchasing, transmission, distribution, and sale of electrical energy, which constitutes the great bulk of its revenues. It also produces, distributes, and sells steam and also some electrical appliances, but they are relatively negligible. This energy, as we have already stated, is furnished to Boston and its vicinity without competition, with just a few minor exceptions.

PROPERTIES

The electric system includes steam generating, transmission and distribution facilities, including transmission lines, cables, sub-stations, and overhead and underground distribution facilities and cables in about forty of the towns, as well as Boston proper.

It is difficult for the layman to ascertain the degree of efficiency, the physical status of these units. Sometimes that is possible, but for the ordinary analyst it is an almost hopeless task. If he could get the engineer's reports in sufficient detail, he could get some help. What he can do is to compare the costs of generation per kilowatt-hour, for instance; but that does not necessarily indicate that the system is efficient or inefficient, because fuel and other costs might be higher in the area. It does, however, help with respect to a particular company to see what its trend of development is; whether, for example, it is gradually paring down its costs. It is possible to get fuel consumption figures in this connection which will furnish a general idea of the efficiency of a particular plant.

It is difficult, also, for the analyst to know the *per cent condition new* of the equipment. 100 per cent condition new would be a brand-new plant. 90 per cent would be 90 per cent new. But a plant 90 per cent new would probably be just as efficient as one 100 per cent new. Studies have been made in that field, and somewhere in between 80 and 90 per cent condition new has been found to be a reasonable expectation. If

we find a lower figure we are getting into a situation where there is probably a lot of inefficiency. If we expect much above it, then we are insisting on eliminating equipment which has a lot of good service life left.

This company's generating facilities comprise three steam stations and two hydro stations, having an installed capacity of about 458,000 kilowatts. It has 117 miles of transmission lines overhead and about 118 miles underground. The latter, of course, is more expensive to install, but the maintenance and upkeep are much less.

OPERATING DATA

The next item to consider is operating data. We shall suggest certain items to include under this heading, but space does not permit the recitation of all of the figures which would be included in this type of study.

It is necessary to consider the customers, breaking them down into various classifications. Sometimes companies report the number of meters; other times they report the number of customers. They are not necessarily the same, because one customer may have more than one meter. The customers are usually classified as residential, commercial, industrial, and other. The residential load is ordinarily the most stable load. Therefore, the larger the residential load is in relationship to the total, the higher will be the degree of stability of revenues and of income. In contrast, a company serving an industry area where the big load comes from industrial users has a volume that tends to fluctuate with the fluctuations in the business cycle. The industrial activity of the area would be the determining factor as to the amount of the industrial load. Since this activity will vary with the cycle, we will have a cyclical result which will cause, possibly, a considerable variation in the operating revenue and even in the net return.

Boston has a stable load, first, because of the high percentage of residential users; second, because of many small commercial establishments which also have a higher degree of stability and demand than do the large power users.

Detroit is not quite so fortunate in that respect. And, thinking in terms of Detroit for a moment, we may observe that not only is the industrial load affected by the business cycle but the cycle also has an important bearing upon the residential load. There is a certain amount of migration of workers in the Detroit area, depending on the degree of industrial activity in the area. People tend to stay in Boston whether we are in a period of prosperity or depression, but they tend to move away from Detroit into the rural areas to live on farms or in smaller communities, where living costs are less, until prosperity returns, at which time they gravitate back to Detroit.

Another matter it is necessary to keep in mind is the source of electrical energy. Boston Edison is almost a 100 per cent steam generating system. Therefore, the fuel costs would be much greater than if we were to consider, for example, Pacific Gas and Electric, or Sierra Pacific, or other companies on the Pacific Coast, where the source is primarily from hydro-electric generating plants and fuel is not an important factor.

The initial investment in a steam plant per kilowatt capacity is less than in a hydro, but it costs more to generate the energy. A hydro plant costs more as far as original investment is concerned, but the operating costs per kilowatt-hour are less. Thus, these two factors tend to equalize each other. By and large, the steam generating systems have been more successful than the hydro, although we shall not go into detail as to the reasons for that at this time.

Another factor in connection with operating data has to do with the system peak load. Peak load determines the lowest amount of generating capacity that a company may have. At no time can a system have less generating capacity than is required to take care of the peak requirements unless it is tied in or interconnected with another system. In that case it would be possible to interchange electrical energy.

Closely allied with the system peak load would be the load factor of the system. That is the relationship of the average load over a period of time to the peak load of the system. It measures, in a sense, the degree of utilization of the plant and is, therefore, of interest to the analyst.

We find quite a variation in the load factor among the different companies. The higher the load factor, the better, because that would indicate a higher degree of utilization of the investment in plant and property. The ideal, then, would be to have our plant operating at 100 per cent capacity all of the time, if it were not for the fact that we must have a reserve to take care of contingencies. If it were possible to even out the load over the twenty-four hours of the day, then we would get the highest degree of utilization of the plant and the highest degree of utilization of the investment, hence, the highest possible earnings. Thus, the nearer the company can approach that 100 per cent the better; but we must always keep in mind that it cannot reach 100 per cent in safety or in reality.

In the case of Boston Edison, the load factor in 1938 was 42 per cent. In 1939 it was 45 per cent. The next year, 47 per cent. By 1944 it had increased to 57 per cent. The load factor of some of the companies on the Pacific Coast will run much higher than that. Up to 65 per cent would not be an unusual figure. We find others that feel rather fortunate if they keep within the 50 per cent level. Generally speaking, however, if

this figure goes below 50 per cent it may be considered a very undesirable load factor, and something should be done to promote sales and business in the off-peak period of the twenty-four hours.

NONFINANCIAL CONSIDERATIONS: DETROIT EDISON

Many of the things that we have said about Boston Edison, as we have observed, will also apply to Detroit Edison. Therefore, we shall consider these nonfinancial factors in relation to Detroit much more briefly than we did with Boston.

The territory served is Detroit and vicinity. This company does the entire residential and commercial lighting business and a large part of the power business in the area served. There are a few exceptions in the area. Some of the large industrial companies have generating plants of their own. About five cities and some eighty-two incorporated villages in the area are served. The population is about three million. And if we visualize the territory of the southeastern part of Michigan and the Great Lakes, we note the convenience of rail and Great Lakes transportation.

Nearly all the factories in that area are operated by electric motive power, and, to repeat, Detroit Edison serves practically all of them. This territory is noted for its metal-working facilities and the production of automobiles. It also leads in the manufacture of other things such as pharmaceuticals, varnishes, heating equipment, electric appliances, and office equipment. It is also the largest producer of alkalis in America. In a word, this is a highly industrialized area, which accounts, as we have already stated, for a higher degree of variation in the earnings than is true with Boston Edison.

The required franchises are held by Detroit Edison. They apply, of course, to the physical operations of the properties, and they are subject to the regulation of the municipalities served, practically the same as we observed in connection with Boston Edison. The management asserts that the franchises are free from burdensome exactions and that most of them are of the terminable type, or indefinite in duration. There are some exceptions, however. The company also distributes some gas in twenty-nine of the communities, under franchises that are not of long duration. These franchises have about thirty years from the time of their inception to run, expiring from 1949 to 1960. Generally speaking, the franchises are favorable.

It will be interesting to make one observation about franchises at this point. It is not considered advisable for an investor to buy the securities, particularly the bonds, of a company, the maturity date of which exceeds the expiration date of the important franchises. That is a general

observation. We do frequently see issues being put on the market in which the bonds mature after the expiration of the franchise. To that extent the investor is assuming a risk. If the public relations are good, the risk may not be too great, but even in such instances the investor is betting on future favorable public relations with a political body that may be in power at the time that the franchise expires, and nobody can guess what the attitude of some future city administration will be. There are many examples of substantial losses to investors who acquired securities that matured simultaneously with or subsequent to the expiration date of the franchises.

We may say that in all cases it is necessary to analyze the franchise expiration dates. If we are preparing a report for some large investor, it is wise to call this information to his attention and let him appraise the risk, if any, involved. Our best investment banking houses put out issues right along where this condition exists, and their belief, naturally, is that new franchises will be obtained on favorable terms. However, this is something that we can only surmise, and it would be much better if an indeterminate or terminable franchise could be obtained.

The rates in the case of Detroit have recently been the subject of considerable controversy. The Circuit Court of Appeals issued a decree which directed the company to impound funds amounting to \$10,500,000, applicable to 1944, and about \$6,000,000 for 1945. These amounts were supposed to offset the increase in cost in taxes under the excess profits tax. The city of Detroit wanted the money rather than to have it go to the federal government, so it required that the company set aside this amount of money. The court finally decided that the company would return it to the customers, amounting to about 9 per cent of the customer's annual bill. Of that amount, the government would have received about six-sevenths and the company one-seventh. The company, therefore, lost about one-seventh of approximately \$17,000,000.

This company was organized in 1903 and has operated efficiently and effectively from that time up to the present. Its properties consist of four large steam generating plants and six very small hydro plants, the capacity being 1,225,000 kilowatts for the system. The plants are interconnected by high-voltage transmission and distribution lines, and the plants are in good condition.

The domestic load, as we have already said, is substantial. The rates are lower than those of Boston. The average use per domestic customer is 1,399 kilowatt-hours, which is slightly above the national average but greatly below that of some companies in the industry.

The company's maximum load in 1945 was 1,034,000 kilowatts, which

was 83.8 per cent of maximum load capacity. In other words, they had a reserve capacity of 16.2 per cent. In the preceding year the reserve capacity from the peak was 14.4 per cent.

We may point out here that a company must have *reserve capacity*. The question is how much reserve capacity it should have. Engineers estimate that reserve capacity should be in the neighborhood of 15 to 20 per cent. If that figure is realistic, Detroit Edison complies with the standard. If the company is interconnected with other systems in a large network, this reserve capacity can be lower. The lower the reserve capacity, the greater the utilization of the plant and the system. On the other hand, the risk assumed is greater should there be an unusual demand which might throw the peak beyond the generating capacity. However, during the war the electric utilities were able to operate on a relatively high load factor and thus to meet the abnormal demand without plant expansion.

FINANCIAL CONSIDERATIONS

We turn now to a comparative study of Boston Edison and Detroit Edison from the financial point of view.

This analysis consists of a consideration of the balance sheet, the profit and loss statement, ratio studies, and an appraisal of the investment qualities of the securities. We shall consider this subject in that order.

First, as to the balance sheet. In Table 5 we have comparative balance sheets of these two companies. We have taken for comparative purposes two years only, 1937 and 1945. However, a comprehensive analytical study would comprise more years than this. To make a proper study, one should consider the experiences of a company during all phases of the business cycle in order to learn how it fares in prosperity, recession, depression, and recovery. It is obvious that if a company cannot do well in a depression, there is considerable probability that it will experience difficulty and possible embarrassment in its attempt to take care of the fixed charges. So, from the viewpoint of the bondholder, a company, the earnings of which fluctuate extensively, will be less attractive than one which experiences a high degree of stability, regardless of the level of general business activity.

In order to get a true picture, it is advisable to trace logically the balance sheet and income statements, and the detailed items under each, over a period of years. That would indicate the change from year to year, and then, if desirable, one might compare the current year with some preceding year that might be regarded as typical, or a desirable comparative year, depending on the objective of the analysis.

The purpose of such a procedure, of course, is to develop a trend, the

TABLE 5
Comparative Balance Sheets
BOSTON EDISON AND DETROIT EDISON
(000 omitted)

Assets	1937				1945				1945 as % of 1937	
	B		D		B		D		B	D
	\$	%	\$	%	\$	%	\$	%		
Fixed	168,076	93.0	312,764	91.7	200,174	92.5	354,610	92.0	119.0	112.0
Current	10,790	6.0	19,010	5.6	14,435	6.7	23,621	5.6	134.5	124.0
Other	2,071	1.0	9,305	2.7	1,400	.8	9,226	2.4	84.5	99.0
Total assets	180,937	100.0	341,079	100.0	216,009	100.0	387,457	100.0	119.5	113.2
LIABILITIES										
Funded debt	53,000	29.3	134,320	39.4	49,563	23.0	115,000	29.7	94.0	86.0
Current liabilities	5,050	2.8	13,340	3.9	10,910	5.1	20,206	5.2	236.0	145.1
Reserves: Depreciation	16,848	9.3	36,823	10.8	43,779	21.1	85,684	22.1	256.0	232.0
Other	—	—	1,146	.3	—	—	9,539	2.5	—	828.0
Common stock	61,716	34.1	127,990	37.6	61,714	28.7	127,990	33.0	100.0	100.0
Surplus: Capital	42,069	23.2	139	—	42,488	19.6	77	—	101.0	—
Earned	2,254	1.3	27,321	8.0	7,555	3.5	28,961	7.5	336.0	115.0
Capital stock & surplus	106,039	58.6	155,450	45.5	111,757	51.8	157,028	40.5	105.0	101.0
Total liabilities	180,937	100.0	341,079	100.0	216,009	100.0	387,457	100.0	119.5	113.2
Current ratio	2.11:1		1.40:1		1.32:1		1.17:1			
CAPITALIZATION										
Long-term debt	53,000	33.2	134,320	46.3	49,563	30.8	115,000	42.3	93.5	86.0
Common stock & surplus	106,039	66.8	155,450	53.7	111,757	69.2	157,028	57.7	105.0	101.0
Total cap. & surplus	159,039	100.0	289,770	100.0	161,320	100.0	272,028	100.0	101.0	94.5
% debt of depr. plant		35.5		48.5		31.7		43.0		

trend being enlightening only as an aid in the projection of future possibilities and probabilities. Statistics are always history and should be so regarded; but, on the other hand, they can be helpful in projecting the future. So if we can keep that general idea in mind, and supplement in our own minds, at least, the experiences during the intervening years, we will have a better viewpoint and understanding of the company.

Let us look at the comparative balance sheets of Boston Edison and Detroit Edison, first, for the year 1937. We observe that the fixed assets of Boston Edison are 93 per cent of the total assets and that those of Detroit Edison are 91.7 per cent.

This figure is of considerable significance because it is the dominant part of the rate base. Companies, in theory, at least, if not actually in practice, are permitted to earn a fair return on a fair value of the properties used and useful in the public service. Therefore, the greater the percentage such properties are of the total assets, the larger will be the investment of the capital in assets that can be used as the rate base. If we have a figure of 93 per cent, then, we have a very high percentage in fixed assets.

To that figure as a rate base will be added a fair amount for working capital. In this case Boston has 6 per cent of its total assets in current assets, and Detroit, 5.6 per cent.

In the case of Boston, we have 99 per cent of the assets, subject to some deduction for investment which might not be included, and probably would not be included in the rate base as a rate-base figure. In the case of Detroit, it would be 97.3. Both of these percentages are very high.

From these figures would be deducted the depreciation reserve. In other words, if the fixed asset figure is acceptable to the regulatory body, there would be deducted from it the depreciation reserve, bringing the figure down to a net figure on which the company would be permitted to earn a fair rate of return. In this particular case, we may observe that the depreciation reserve of Boston Edison is 16.8 millions of dollars, or 9.3 per cent. That figure would be deductible from the fixed assets, bringing the percentage down to about 83.7 per cent. To this would be added the working capital of 6 per cent, making 89.7 per cent of the total assets on a net basis available on which to earn a fair rate of return.

How large the current assets should be is somewhat problematical. No regulatory body will permit the company to earn a return on current assets if they are excessive. We are thinking in terms of working capital, capital that is working. If the figure is too large, it means that it is not working, and, therefore, there is no justifiable reason why the customer should pay a return to support idle capital. Hence, regulatory bodies usually test the adequacy of the current assets in relation to the working

capital requirements of the particular company. In this case, we may say 6 per cent is not excessive. The test sometimes applied is that working capital should be equivalent to about one and one-half months' requirements, or, roughly, about 10 per cent of operating expenses. These figures, of course, are general, but public service commissions have used these bases in their attempt to determine a fair working capital figure. Generally speaking, in the neighborhood of 6 per cent to 7 per cent of the total assets in current assets is pretty much in line and could be accepted in the rate base. From the viewpoint of the distribution of the assets, both Boston Edison and Detroit Edison are in satisfactory positions.

FUNDED DEBT

Turning now to the matter of funded debt, Boston Edison's funded debt of \$53,000,000 is 29.3 per cent of the total assets or total liabilities. If we observe the capitalization figure at the bottom of the table, we note that it is 33.2 per cent of the total capitalization, including surplus.

The question arises as to what is a desirable ratio of funded debt to total capitalization.

Various standards have been suggested. An ideal would be roughly 50 per cent. However, if there are no preferred stock issues outstanding, that percentage would be increased to as much as 60 per cent. The Securities and Exchange Commission indicated that they regarded as ideal a capital structure of 50 per cent in bonds, 25 percent in preferred stock, and 25 per cent in common stock and surplus. This may be used as a fairly adequate standard of comparison. Thus, if a company fits into that pattern, or approaches it, we can say that its capital structure is pretty much in line with the company-accepted practice and meets with the general viewpoint, at least, of the Securities and Exchange Commission. We should point out, however, that this standard applies specifically to electric light and power-operating companies and to no others.

We may offer an opinion that public utilities should operate on borrowed capital, the reason being that the amount paid for the use of borrowed capital is lower than the rate of return that a stockholder would receive who puts in venture capital. Therefore, the stockholder will benefit whenever the return on the borrowed funds is greater than the price paid for the use of those borrowed funds. So, up to a point, a utility with a rather high degree of stability of income should employ bonded debt in the interest of the stockholder. In addition, if the utility can borrow money cheaply, it can achieve a lower rate structure, and the customer, therefore, pays less for the service he gets. Thus, both from the viewpoint of public interest and from the viewpoint of the stockholder,

trading on the equity is desirable. The chief requirement is that the indebtedness be in proper relationship to the total capitalization and that the earnings in the poorest years will be sufficient to take care of the interest requirements. As a matter of fact, we find that it is the usual practice for utilities to operate on borrowed money and that it is decidedly unusual for a company not to have outstanding bonds.

Let us now consider the long-term debt of Detroit Edison. Its obligations amount to 134.3 millions of dollars, or 39.4 per cent of the total assets and 46.3 per cent of the total capitalization and surplus, the common stock and surplus constituting the balance, or 53.7 per cent. This situation is probably more typical than that of Boston Edison. Indeed, the funded debt in relation to both totals could be a little higher and not be out of line with generally accepted conservative practices.

We observe the relationship, then, of the debt, first, to the total assets, and second to the fixed assets. The fixed assets, if they are pledged, constitute the security back of the debt. Thus, if we were to take the net fixed assets, that is, after deductions and depreciation reserve, and compare that figure with the funded debt, we would obtain the number of dollars of fixed assets back of each dollar of funded debt. If the fixed assets amount to one and three-fourths or two times the funded debt, from an asset point of view, that is satisfactory. If we have a higher figure than that, the more conservative is the capitalization and the higher the investment caliber of the bonds as tested by this one criterion or standard.

In the case of Boston Edison, if we deduct the 16.8 millions of depreciation reserve from 168 millions of fixed assets, we would have about 151.2 millions of assets. Comparing that figure with 53 million dollars of funded debt, we see that there is more than adequate asset coverage for the bonds. We may apply the same test to Detroit Edison, and deduct the depreciation reserve of 85.6 millions from fixed assets of 354.6 millions. We find that there are 269 millions of depreciated assets as against 115 millions of funded debt. This is a coverage of 2.3 times.

With reference to fixed assets and reserve for depreciation, it is interesting to note that public utilities use a little different method for setting up their balance sheet than do industrials. Characteristically, industrials deduct the depreciation reserve from the assets on the asset side of the balance sheet and extend the net amount, the net fixed asset amount. Utilities generally show the plant account at its cost, and then, on the liability side, show the depreciation reserve, although there has been a tendency recently on the part of some companies to show the reserve as an offset.

PROPORTION OF DEBT TO DEPRECIATED PLANT

At the bottom of Table 5 we observe the figure indicating the percentage of debt to depreciated plant. This figure should probably be considered in connection with the relationship of the debt to the capitalization of the company. If we take the percentage of depreciated plant represented by Boston Edison's funded debt in 1945, or 31.7 per cent, we see that there is an excess of depreciated plant for each dollar of liability in the form of long-term debt. In fact we have approximately \$3 of depreciated plant for each dollar of bonds. In the case of Detroit, we have approximately \$2.30 of depreciated plant for every dollar of debt. In both cases this is quite satisfactory.

In this connection, public utilities make provision for paying off their bonds, not oftentimes through sinking funds, but through reinvestment of the depreciation reserve in plant and property. By so doing, they maintain the integrity of the original investment, and if they could borrow with that plant as an asset or security to begin with, by the same token, when the bonds mature, they will be able to refund them and still give as much plant security as they did originally. This is especially true where a company is expanding and growing and where, rather than to go to the public to raise new funds to finance that expansion, they use the depreciation reserves for that purpose. Thus, while the old plant is depreciating, a new plant is being constructed to take its place and to offset the loss. If the depreciation reserve is large enough, there will be no impairment of capital, and the security back of the bonds remains intact.

CURRENT RATIO

Considering this statement further, we will observe that the current liabilities of Detroit are 3.9 per cent of the total, and of Boston 2.8. If we relate these figures to the current assets, we will have the current ratio. In the case of Boston, it is 2.1 to 1, and in the case of Detroit 1.4 to 1, in 1937. In 1945, the current ratio was lower for both companies, Boston 1.32 to 1 and Detroit 1.17 to 1.

Taking the latter figures is equivalent to saying that Boston had \$1.32 of current assets for each dollar of current liability in 1945 and that Detroit had \$1.17 of current assets for each dollar of current liability. Hence, there could not be much of a shrinkage in the realizable value of the current assets without impairing the companies' ability to meet their currently maturing obligations.

The current ratio figure is intended to show the current position of the company, and the test, in a general way, is its ability to meet its currently maturing obligations. Characteristically, the current ratio of electric light and power companies is low. The more nearly the industry operates

on a cash basis, and the more stable the earnings, the lower may the current ratio safely be.

We may say that in 1945 the current ratios are reaching the lower limits of safety and desirability. From one and a half to two times would be about right, year in and year out. If any unusual development occurs, the company might experience difficulty in taking care of current requirements. Indeed, one of the reasons why Detroit Edison's figure is so low is that it was called upon to make unusual disbursements, as we pointed out previously, in connection with certain refunds to the customers based on the city's desire to reap the benefits of the excess profits tax rather than to pass it on to the federal government.

RATE BASE AND CAPITALIZATION

Another test that we apply is the relationship of the rate base to the capitalization. The reason is obvious. If the company is allowed a fair return on the rate base, and if the capitalization is no higher than the rate base, by the same token, there will be a fair return on the capitalization. Let us refer to the 1945 figures in Table 5 to determine the situation with regard to these two companies in this respect.

Looking at Detroit Edison, we have \$354,610,000 of fixed assets from which we deduct the depreciation reserve of \$85,684,000, giving a net figure of \$268,926,000. Since we have capitalization of \$272,028,000, including surplus, we have only a small difference between this figure and the rate base exclusive of the allowance for working capital.

If we do the same thing for Boston and deduct the depreciation reserve of \$43,779,000 from fixed assets of \$200,174,000, we have a base of \$156,395,000. Since total capitalization and surplus is \$161,320,000, the depreciated rate base would be slightly lower than the capitalization and surplus.

If the regulatory body is fair and gives the utility a fair return on its rate base, then we have here a test as to the fairness of the return on capitalization. If it is out of line, we may say that these securities are going to have a hard time to earn a suitable return, and hence we will stay out of that company. Further, such a company in the future might have difficulty in financing because of the fact that its capital structure is too high in relation to its rate base.

The assets comprising rate base, theoretically, are derived from a few sources. One source would be, of course, the sale of stocks and bonds—the fundamental source. Another large source would be the flowing back of earnings into the business. Those two could constitute the chief sources. If, however, the proceeds from the sale of stocks and bonds and the earnings have been dissipated, there is no reason why the consumer

should pay a fair return on the capital, if the capital has been wasted. On the other hand, if it is properly applied, and an excess is reflected in the surplus of the earnings, we may include the surplus and say it is the stockholders' contribution on which they should have a fair return also.

Another thing we are justified in doing is to add to the depreciated value of the plant an acceptable amount of working capital, or current assets. Thus, if we were to apply or add the current assets in the case of Boston Edison, we would find that some of the current assets, plus the depreciated value of the plant, would be more than the capitalization. Hence a fair return on that base would constitute a fair return on the capitalization.

Also, if the company is trading on the equity, it will be able to borrow at a rate below the fair rate of return that the regulatory body allows on the capital, hence the amount that goes to the junior capital, the stockholders, is augmented. Roughly, 50 per cent bonded indebtedness to total capitalization would give to the stockholder a larger return than if there is no debt, provided the company was able to borrow at an interest rate lower than the rate of return it receives on the rate base and also on the total capitalization.

We must be clear on one thing, however. The rate of return from the viewpoint of the regulatory body has little relationship to the capitalization. The company could have expended the proceeds for many things that would not be included in the rate base. Therefore, the regulatory body will say, "We will permit you to earn a fair return on the fair value of the properties used and useful in the public service. The other properties, no."

COMPARISON OF 1937 AND 1945

We observe in Table 5 that we have a horizontal comparison for two years only. This is done merely for purposes of suggestion, and it is not intended to be complete or all that is satisfactory or desirable from the viewpoint of a balance sheet analysis. To repeat, it is necessary to take many years and give horizontal comparisons over a period of years to get a perfect idea of the trend. This table does, however, give us some idea of the comparisons that can be made.

In considering the relationship of the 1945 figures to the 1937 figures, we will observe that in the case of Boston Edison the fixed assets group in 1945 was 119 per cent, or an increase of 19 per cent over 1937. Detroit's comparable figure would be an increase of 12 per cent, which is not much in the way of increase during that period. Current assets are larger, we will observe, to the extent of 34.5 percent in the case of Boston and 24 per cent in the case of Detroit.

In total assets, Boston had an increase of 19.5 percent and Detroit of 13.2 per cent. This is not a remarkable development during that period, for as we know, this was a war period when comparatively little expansion could have been made, even though desirable. Also it must be kept in mind that if the company spends five million dollars in the way of plant replacement, it may possibly have to write off three or four million dollars against the depreciation reserve. The total assets figure shows only the net result over that period of time. It is not intended to show the actual amount of money that went into new plant during the period.

One significant change was the decrease in the funded debt. Boston's funded debt was decreased 6 per cent and Detroit's, 14 per cent.

There was a very marked increase in the depreciation reserves of 156 per cent for Boston and 132 for Detroit. The other items are not particularly significant in this respect.

We will note at the bottom of Table 5 that the total capitalization and surplus of Detroit Edison actually decreased during the period. Therefore, relatively, the relationship of the capitalization to the rate base improved.

INCOME STATEMENT

We talked, in considering the balance sheet, about vertical percentages, and we divided all of the items in the balance sheet by the total assets, total assets constituting 100 per cent. When we look at the income statement, which is shown for these two companies in Table 6, we use the operating revenues as 100 per cent. This, however, is not entirely accurate, because the small item in the income statement of *other income* should really be included. But the item is usually negligible, and, for convenience, we may prefer to put it down where it appears in the income statement rather than to put it in with the revenues, since it is not actually a revenue.

In 1945 Boston Edison had operating revenue of \$46,780,000. Detroit had operating revenue of \$85,177,000. The increase over 1937 was 42 per cent for Boston and 44 per cent for Detroit Edison. Thus, the so-called dynamics of the Detroit territory were not especially reflected in increases in operating revenue. Boston, in other words, during the war period, carried on many types of activity which caused its load to be stepped up substantially, just as did Detroit.

The first item below operating revenue, *operating expenses*, roughly 40 million dollars for Boston in 1945, consists of the items following: operating expenses, maintenance, depreciation, federal taxes, and other items. The figure of 85.5 per cent we call the operating ratio including taxes. Sometimes it is advisable to obtain the operating ratio exclusive of

TABLE 6
Comparative Income Statements
BOSTON EDISON AND DETROIT EDISON
(000 omitted)

	1937			1945			1945 as % of 1937	
	B	%	D	B	%	D	B	D
Operating revenue	32,911	100.0	59,135	46,780	100.0	85,177	142.0	144.0
Expenses:	25,455	77.4	43,292	39,956	85.5	71,363	155.0	165.0
Operating	13,151	40.0	23,532	19,094	41.0	40,768	147.0	174.0
Maintenance	2,590	7.8	4,262	3,273	7.0	6,471	130.0	152.0
Depreciation	3,460	10.5	7,731	5,481	11.7	8,947	158.0	116.0
Federal taxes	808	2.5	1,321	6,290	13.4	3,599	780.0	278.0
Other	5,446	16.6	6,446	5,818	12.4	11,578	112.0	184.0
Net operating revenue	7,456	22.6	15,843	6,824	14.5	13,814	92.0	87.0
Other	213	.7	124	1	—	640	—	515.0
Gross income	7,669	23.3	15,967	6,825	14.5	14,454	89.0	88.0
Fixed charges	2,287	7.0	6,016	1,722	3.7	6,523	76.0	108.0
Net income	5,382	16.3	9,951	5,103	10.8	7,931	95.0	82.0
Dividends	4,937	15.0	7,613	4,937	10.5	7,634	100.0	100.0
Surplus for year	445	1.3	2,338	166	.3	297	37.0	68.0
Times charges earned	3.36		2.87	3.96		2.65		
Earned per share	2.18		\$1.56	\$2.06		\$1.25		
Dividends per share	2.00		\$1.20	\$2.00		\$1.20		

income taxes. It is easy enough to do that, in this case, by merely deducting from the 85.5 per cent for Boston 13.4 per cent for federal taxes, leaving 72.1 per cent. If we make a comparable deduction for Detroit, we have 79.6 per cent.

The chief significance of the operating ratio exclusive of taxes is the comparability of the ratios of the two companies. There might be a great deal of difference in the federal taxes of the two. For instance, if one of them should have a large debt reduction during the year, under the tax law, the company could set that up as an offset and would not have to pay as high taxes. Therefore, its operating ratio including taxes would be lower but would not be truly comparable to that of other companies. What might appear to be a reflection of superior management and greater efficiency is thus revealed more accurately in the ratio excluding taxes.

There is an additional reason for using the operating ratio exclusive of taxes. Federal taxes are not controllable by the management. About the only way the management can reduce the taxes is to do a worse job and earn less. Therefore, the higher the taxes are, other things being equal, the higher the degree of success in operation that is indicated. Thus we do not have as good a test of the efficiency of the system if we include taxes as if we leave them out.

These other items, to a degree at least, are subject to managerial control and modification. This is especially true of the operating expenses. In 1945 the operating expenses of Boston were 41 per cent; of Detroit, 48 per cent. Sometimes this figure is deceptive because exactly the same things are not always included in the operating expenses. The better test always is to compare a company with itself, because there is a tendency toward consistency of accounting within a particular company. To a degree, there is consistency among all of them, because they come under regulation in that respect.

GROSS INCOME

The operating ratio, then, shows how much it cost to get a dollar of revenue. In the case of Boston, it cost 85.5 cents for each dollar. In the case of Detroit, it cost 83.9 cents. This means that in the case of Boston there are 14.5 cents remaining, plus a very slight amount of other income, to take care of the capital. First, we have the gross income figure which would be applicable for the payment of the fixed charges, then, after they have been taken care of, the net income or the balance accruing to the stockholders; first, the preferred stock, if there is any, then the balance for the common stockholders, either in the form of dividends or the accumulation of surplus. Thus, we are interested in the

operating ratio because it limits the amount of gross income that can possibly come down to the security holders.

The type of test we apply in this connection would be the gross income in relation to the investment. One test would be in relationship to the rate base, and the other one would be in relationship to the total capitalization. If a company were to state that it earned 5 per cent on its assets, it would determine that figure by dividing the gross income by the value of the assets. The same method would be followed to determine the return on its capitalization, or its rate base. From that point on, it depends on the capital structure, on the type of financing the company has done in the past, as to how much of that gross income will go to the bondholders and how much to the stockholders, depending upon the amount of bonds and the interest rate.

Therefore, we lay stress on the gross income figure for two reasons: First, it shows the amount of return on the rate base. Second, it shows the amount applicable to the security holders, both bondholders and stockholders.

In more recent times, the percentage of gross income to total revenues of electric light and power companies has tended to decrease. We once expected a figure of from 20 to 25 per cent of total revenue. We now expect a figure of from 15 to, say, 18 per cent. In this case, referring to Table 6, if we go back to 1937, gross income is very high—23 per cent for Boston and 27 per cent for Detroit. In 1945 it was 14.5 per cent for Boston and 16.9 percent for Detroit.

This, however, may be somewhat deceiving. If gross revenues increase, it is possible to have a lower percentage of gross income and still have more money for the security holder. It is obvious that 15 per cent of \$47,000,000 is more than 15 per cent of \$30,000,000. In other words, in 1945 the gross income of Boston Edison amounted to 6.8 millions or 14.5 per cent of the operating revenues, whereas in 1937 the gross income was 7.7 millions or 23 per cent. There was considerably less difference in the dollar amount of gross income than there was in the percentage.

Again, we cannot compare these percentages horizontally over the years, and, finding a trend which might be downward, say that we have a worsening condition. Indeed, the percentage could decrease and the condition could be improving because of a higher base. This is where the beginner deceives himself. It is preferable to look at the actual figures rather than the percentages in such instances, and to relate the actual figure to the capitalization or the rate base, rather than to use a percentage as a basis for determining the trend.

The fixed charges constitute a comparatively small percentage of the total available. We notice a splendid situation in this regard in the case

of Boston Edison. We get the figure by dividing the gross income, that is 6.8 millions, by 1.7 millions, and for 1945 we find that the fixed charges were earned 3.96 times. The comparable figure for Detroit is 2.65 times.

The question arises as to how many times fixed charges should be earned in order for the security to be of investment quality. Boston Edison would be given, we might say, based on these figures, and over the period we have, at least an AA rating, whereas Detroit would probably be given an A rating. Briefly, fixed charges should be earned on the average at least two and one-half times and probably one and one-half in bad years in order for the bonds to be of investment quality.

SECURITIES OUTSTANDING

Briefly, let us consider the securities of these two companies. First as to Boston Edison, we note from the information in Table 7 that it has one bond issue outstanding in the amount of \$53,000,000 bearing interest at $2\frac{3}{4}$ per cent and maturing in 1970. This bond is callable up to the end of 1946 at 107 $\frac{1}{2}$. It also has a sinking fund provision amounting to 1 per cent per annum of the maximum amount of bonds outstanding. It is a first mortgage on all of the properties and franchises, and also the bond indenture protects the issue against dilution by the issuance of new bonds. These are the usual provisions in a bond of quality.

TABLE 7
Data on Bonded Debt
BOSTON EDISON COMPANY

Description

First 2-3/4s, A, 1970—\$53,000,000

Callable at 107.5 to 12/31/46; 107.2 to 12/31/47, etc.

Sinking fund: 1% of maximum amount outstanding.

Security: 1st mtge. on all properties & franchises. Also protected against dilution of security.

	1935	1937	1940	1941	1942	1943	1944	1945
<i>Times fixed charges earned</i>	2.61	3.71	3.23	4.46	4.08	4.25	4.27	3.96
<i>Price: 107$\frac{1}{2}$</i>								
<i>Yield: 2.38%</i>								

The primary test of the investment quality of a bond is the amount and dependability, or stability, of earnings available for the payment of the interest during the life of the bond, and the ability to take care of the sinking fund provisions during the life of the issue.

In the case of Boston Edison, interest was earned 2.61 times in 1935, 3.71 in 1937, 3.23 in 1940, 4.46 in 1941, 4.08 in 1942, 4.25 in 1943, 4.27 in 1944, and 3.96 in 1945. This indicates consistently large coverage. Therefore, applying our main test of investment quality, this bond ranks high.

In March, 1946, it was selling at about 107½; that is, at its call price. Thus, the yield to the call date of that year was virtually nil, but the yield to maturity was about 2.38 per cent. The yield being very low takes away some of its attractiveness in the way of a commitment. Of course, the bondholder runs the chance of the issue being redeemed. However, since it bears a coupon of 2¾ per cent, there would seem small likelihood of that taking place. We might consider the bond to be of high quality but would not suggest its purchase at this price because of the very low yield.

Let us next go to the Detroit bonds, the data on which are shown in Table 8. There are \$134,000,000 of these bonds outstanding: the General and Refunding 4s of 1965 in the amount of \$49,000,000; the General and Refunding 3½s of 1966, amounting to \$35,000,000; and the General and Refunding 3s of 1970, amounting to \$50,000,000. Roughly, the same provisions and covenants apply to these three issues. They are all callable at different rates. There is no sinking fund provision in any of these issues, which might be an objectionable feature. They are secured by a first mortgage on the entire assets of the company and also its franchises. They are also protected against dilution of equity.

TABLE 8
Data on Bonded Debt
DETROIT EDISON COMPANY

Description

General & Refunding 4s, F, 1965: \$49,000,000

Callable at 105½ to 9/30/46; at 105 to 3/31/48

Sinking fund: None

Security: Equally with series G and H by a first mortgage on entire fixed assets and franchises. Protected against dilution of equity.

General & Refunding 3½s, G, 1966: \$35,000,000

Callable at 105¼ to 8/31/47; at 105 to 2/28/49

Sinking fund: None

Security: Same as series F above

General & Refunding 3s, H, 1970: \$50,000,000

Callable at 108 to 1950

Sinking fund: None

Security: Same as F and G

	1935	1937	1940	1941	1942	1943	1944	1945
<i>Times fixed charges earned F, G, and H</i>	2.53	2.87	2.73	3.01	2.63	2.83	2.34	2.65
	F	G			H			
	—	—			—			
<i>Price</i>	107	108½			109¾			
<i>Yield</i>	3.50	2.92			2.48			
<i>Rating</i>	Aa	Aa			Aa			

We have mentioned that the absence of a sinking fund provision was

objectionable. From one point of view it is objectionable to have a sinking fund. If a bondholder has a desirable issue, he would like to keep it. The sinking fund call may take it away from him. Thus, there is not the same degree of assurance that the bond can be held to maturity if it does have a sinking fund. On the other hand, the sinking fund helps to retire the issue before the final date. In that way it builds up the strength back of the remaining outstanding bonds. It also, of course, helps to reduce the funded indebtedness of the company, and thereby improves its capital structure.

In the case of Detroit Edison we have found that the capital structure is pretty well balanced as it is. Therefore, there is not so much need of the sinking fund provision. Further, when interest rates are low, the company can earn more on its money by keeping it in the business than it can save through retiring low yielding issues. Hence, from the viewpoint of the stockholder, it may be desirable to have the funds kept in the business rather than to have them used for debt retirement. At maturity, if the company has properly maintained its plant and set up adequate depreciation reserves, it will be able to refund the retiring issue.

The interest coverage on these three issues for the same years we used in the other instance is respectively: 2.53, 2.87, 2.73, 3.01, 2.63, 2.83, 2.34, and 2.65 times. We will note that the coverage is not so good as that of Boston Edison. Since there is no sinking fund provision, and since the percentage of debt to total capitalization, we will recall, is slightly higher, we cannot rate these bonds as high as we would the Boston Edison bonds.

The 4s of 1965, selling currently at 107, yield 3.5 per cent. The 3½s of 1966, selling at 108½, yield 2.92 per cent. And the 3s of 1970, at 109¾, yield 2.48 per cent. These are the yields to maturity. Since the bonds are selling close to their call prices, there cannot be much in the way of an appreciation in them, and they are only fair from the viewpoint of investment at these prices.

TABLE 9
Common Stock
BOSTON EDISON AND DETROIT EDISON

	1937				1944		1945	
	B	D	B	D	B	D	B	D
Earnings	\$2.18	1.56	2.39	1.69	2.11	1.01	2.06	1.25
Dividends	\$2.00	1.20	2.00	1.20	2.00	1.20	2.00	1.20
Average price	35	24	34	23	35	20	41	23
Current price							44	27
P/E ratio	16.0	15.4	14.3	14.0	16.6	19.8	19.9	18.4
P/E ratio on current price							21.2	21.3
Yield	5.71	5.00	5.90	5.21	5.70	6.00	4.55	4.45
	<i>Boston</i>				<i>Detroit</i>			
Par	\$25				\$20			
Number of shares	2,468,656				6,361,300			

With reference to the stocks of these two companies, we find certain data in Table 9. In observing the earnings and dividends of the two companies, we see that in both instances they earned more per share in 1937 than they did in 1945, and in fact also in 1944. No doubt, the primary factor there would be taxes plus other cost items. We recall in the case of Detroit that there was an adjustment made in the rate situation amounting to about \$10,000,000 in 1944 and over \$6,000,000 in 1945, which would be reflected in lower earnings for the company.

The dividends were consistent during the period under review and, indeed, even for a longer period. The average price is now not much in excess of what it was in 1937.

The price earnings ratio, over the years, is slightly higher in the case of Boston than of Detroit, with the exception of 1944, in which year the price earnings ratio of the Detroit stock was slightly higher. Taking the current price, they are identical.

Various factors affect the price earnings ratio of a company. This ratio indicates the number of times earnings that the stock is selling. The more conservative the issue, other things being equal, the higher will be that ratio because there is a greater dependability of earnings, and one is willing to pay a higher price for those earnings because of that fact.

However, there may be factors that will offset that, the feeling being, in the case of Detroit Edison, that the outlook for improved earnings is greater, relatively, than that for Boston Edison. For that reason, the public is willing to pay approximately the same for it even though the earnings are not quite as stable.

We must be careful about price earnings ratios. Sometimes a price earnings ratio of 100 in one company is better than a price earnings ratio of 5 in another, or even the same company at different times and under different conditions. For instance, as we are emerging from the depths of a depression, the earnings are negligible, if indeed they are not nil, and bear little relation to market price. The price earnings ratio should, in part, reflect appraisal of the future prospects of earnings so that, as we emerge from the depression, we will pay a higher price earnings ratio, simply because we know that the earnings later on will make that price earnings ratio very low in relation to the present percentage price.

If we were to study the public utility industry, we would find that the price earnings ratios for these two companies are pretty much in line. There should be somewhat of a down-trend in the ratios with the elimination of the excess profits tax. However, these prices do not reflect that down-trend.

Referring to the yields, we will observe that the yield of Boston Edison

has been higher most of the time than that of Detroit, the exception being 1944, when Detroit was having difficulty about the excess profits tax and the impounding of funds as an off-set. People were a little afraid of the stock. They were not sure of it, and consequently this was reflected in the price.

B. PEOPLES GAS LIGHT AND COKE COMPANY

In this section of our discussion we shall consider the Peoples Gas Light and Coke Company, a public utility operating in a field entirely different from the utilities we considered previously. This company serves the territory of Chicago and its immediate environs.

TERRITORY AND MANAGEMENT

It will not be necessary for us to go into a discussion of the population growth of Chicago because we discussed that previously in our consideration of the population trends in many of the large cities of the country. It is sufficient to say that the population growth in Chicago has been substantial and consistent over the years. From that point of view we can conclude that the territory is a dynamic one, and because of that fact, despite periodic rate reductions, the company has been able to show rather consistent earnings over the years.

Chicago, the second largest city in the United States, is particularly noted for its steel manufacturing, meat packing, the manufacture of agricultural implements, certain musical instruments, chemicals, and, in addition, it has substantial warehousing facilities, especially for grain and grain products.

It is the jobbing center of a good part of the northern part of the United States. Because of the rich hinterlands, the company, and of course the city proper, draw on considerable wealth and industrial activity and agricultural activity over substantial distances. This has an important bearing, of course, on the future of the territory served by the company, and again we can say that from this point of view the territory is a desirable one.

Chicago is also the financial and commercial center of a good part of the country. Large financial institutions, among the largest in the country, are located in Chicago. As a financial center, it is probably only exceeded by New York City.

It is also the largest railroad center in the world. Railroads operating east and west and north and south more or less converge at Chicago. That is true, despite the fact that Chicago is not too well situated. It is not at the southern point of Lake Michigan, but is somewhat north of that point on the west shore. This means that the east and west traffic

must veer northward in order to go into Chicago. But the roads found it profitable to do so, and so, despite that physical objection, it still remains the railroad center of the United States and of the world.

It also is the center of the Great Lakes traffic for grain, fuel, iron ore, and a good many of the larger bulky products which can be transported more cheaply by water than rail.

Our ultimate conclusion is, then, that this is a most desirable territory in which to operate. Therefore, the future success of Peoples Gas Light and Coke is tied up definitely with a city, the outlook of which is favorable.

FRANCHISES

In 1855, the state of Illinois granted to the company, at the time of its incorporation, a perpetual franchise. That franchise was amended in 1865 and has been in operation and use by the company since that time. The franchise covers the entire city of Chicago, but it is not exclusive. That would mean that it would be possible, if the city saw fit, to permit others to come in and operate in the area. However, the company does operate exclusively despite that fact. Its authority covers the manufacture and sale and distribution of artificial and natural gas in the territory served.

Two of its subsidiaries, Ogden Gas Company and Universal Gas Company, had their franchises expire in 1944 and 1945 respectively. Under the franchise arrangement, the city was permitted to buy these properties on an appraisal basis. It has not elected to do so. So it is probably correct to assume that there is little intention of the city's taking them over. However, even if they were taken over it would not make very much difference in the operation of Peoples Gas Light and Coke because these small subsidiaries' operations represent a small percentage of the whole.

The Chicago District Pipe Line Company, a subsidiary, was granted, in 1943, a certificate of public convenience and necessity by the Federal Power Commission, which gave it the authority to transmit and sell natural gas in interstate commerce. We realize that control of the sale of natural gas and also of electricity in interstate commerce is under the control of the Federal Power Commission and that without the certificate of convenience and necessity the company could not operate.

REGULATION

The company is subject to the Illinois Commerce Commission. This covers practically all phases of its operation. The commission has been rather rigid in its standards and requirements. However, the company has for the most part been able to operate on a profitable basis.

The Chicago District Pipe Line Company is under the regulatory control of the Federal Power Commission. This does not mean that it is not also subject to the control of the Illinois Commerce Commission. We will recall that even though a utility may be subject to the regulation agencies of the federal government it may also be subject to regulation by local authority. A local authority may regulate just as long as it does not impinge upon the regulatory power of the federal agency. Therefore, Chicago District Pipe Line Company is subject to the Federal Power Commission and is also subject to regulation by the Illinois Commerce Commission.

RATES

The rates of the company are relatively low, the reason being that it uses a mixture of natural and artificial gas. Gas is piped to the city from the Yucatan Field of Kansas and the Panhandle Section of Texas by the Natural Gas Pipe Line Company of America which turns the gas over to the Chicago District Pipe Line Company at Joliet and Wedron, Illinois. From that point on it is distributed by this wholly owned subsidiary of Peoples Gas Light and Coke Company.

Natural gas has greater heat quality than has manufactured gas. It ranges normally around 1,000 B.T.U.s per cubic foot, whereas artificial gas ranges around 540 or 550. The Peoples Gas Light and Coke Company mixes the two, and the people are served with a mixed gas of about 800 B.T.U.s per cubic foot. A therm is equivalent to 100,000 B.T.U.s. Peoples Gas Light and Coke uses therms to express its gas quantity.

In Chicago the residential rate for general use for the first two therms is 58 cents. The next eight therms are 15 cents per therm. The next 90 are 12 cents per therm. The next 100 are 10 cents; the next 300, 8 cents; and over 500 therms the rate is 7 cents per therm. The rate is reduced very rapidly with the increased usage. It is obvious that larger use is encouraged. The minimum charge is 60 cents per month. For space and water heating the rate for the first two therms is also 58 cents. For the next eight therms it is 15 cents per therm; the next 10 are 12 cents per therm, and over 20 the rate is 7 cents. This clearly shows the efforts of the company to encourage large usage, and due to the fact that the company has access to large supplies of natural gas to mix with its artificial gas, a considerable amount of which it buys from others, it is in a better position than many companies in different areas to encourage large usage. The mere fact that the rates are low makes competition from other types of fuel less severe.

It may be said that the company boasts of a well-balanced rate structure. The rates are classified so as to encourage consumption by

many types of possible users, keeping in mind, of course, the necessary income to the company. It should be realized that any utility that can obtain business which produces an income a little above cost adds to the over-all average. Thus, if we have marginal situations, any charge imposed on them above the cost of rendering that service will contribute to the general figure and will make the sum total of all rates lower. That is the policy that this company seems to have adopted.

The Natural Gas Pipe Line Company of America, of which a little over 20 per cent of the stock is owned by Peoples Gas Light and Coke, was directed by the Federal Power Commission to reduce its rates. In 1945 it reduced its rates some \$600,000. The Illinois Commerce Commission insists, when Peoples gets lowered gas rates, that it pass them on to the consumer, and almost simultaneously with the rate reduction by Natural Gas Pipe Line Company of America of \$600,000, Peoples Gas Light and Coke reduced its rates in the amount of about \$438,000, becoming effective in 1945.

The revenues per therm for general customers decreased from 12.2 cents in 1940 to 10 cents in 1945. The interruptible service increased from 1.5 cents in 1940 to 1.7 cents in 1945. The wholesale rate decreased from 2.3 cents in 1940 to 1.8 cents in 1945. And the total decreased from 5.4 to 4.8 in 1945.

The company sells some of its gas on what is known as the interruptible service basis. There are certain seasons of the year when it needs all of the natural gas it can obtain from the Natural Gas Pipe Line Company of America to take care of customers on a firm basis. There are certain seasons of the year, notably the summer months, when the company has excess natural gas. That gas is sold to the large industries at a very low rate, but it is subject to interruption. It is not a guaranteed amount. The company hopes, as time passes, to utilize all of that interruptible gas on a firm basis. If it were to do so, it would mean that its average rate would be higher because the interruptible rates are very low. In the other seasons when this gas is not available the industrial company using the interruptible gas would have to provide gas from other sources, and therefore would have to have stand-by plants.

PUBLIC RELATIONS

The scandal arising out of the Insull management more or less discredited utility managements everywhere, and certainly Peoples Gas Light and Coke felt the general effect because it was one of the large properties of the Insull interests. While the management of Peoples Gas Light and Coke had a difficult job in overcoming that prejudice, it is

clear that they have done so in a commendable manner. Any onus that formerly existed is now pretty well eliminated.

Out of that scandal a situation developed that has continued to the present time, and no doubt will continue into the remote future. That is the determination on the part of the people and their representatives, the regulatory bodies, to insist that public utility companies render a high standard of service at the lowest possible rates. There has been a greater pressure on utility managements as a result of the difficulties in 1929 and also probably as a result of the very extensive investigation by the Federal Trade Commission in which many of the abuses in the industry were brought to light and made the object of regulatory scrutiny.

There has been a tendency, then, for closer supervision over the industry, but it seems clear that this management has made good in that respect, and we can conclude that public relations are satisfactory.

The population served is 3,750,000. It is in a rather densely settled area. We shall see a little later on some of the effects of serving a population which is very dense in comparison with a sparsely settled situation. This company serves gas consisting of about 55 per cent natural and about 45 per cent manufactured gas to homes, a great variety of industries, and in some cases other public utilities.

With a few minor exceptions, the business has shown a wholesome uptrend since 1931 when natural gas was first introduced in Chicago. Its peak volume, reached in 1940, amounted to 44.9 millions of dollars. There has been a slight decline since then, but it has been relatively negligible.

NATURAL GAS PURCHASE CONTRACT

As was stated, Peoples' subsidiary, the Chicago District Pipe Line Company, operating under the supervision of the Federal Power Commission, obtains its natural gas from the Natural Gas Pipe Line Company of America at Joliet and Wedron, Illinois. It pays for the gas at the rate of \$1.46 per month per thousand cubic feet on a capacity charge basis, and then in addition it pays a commodity rate of 7 cents per thousand cubic feet.

Peoples has committed itself to pay for not less than 120,000,000 cubic feet of maximum daily demand. That has not proved burdensome. On the contrary, the company has wanted more gas than it has been able to receive, and there has recently been developed an expansion program whereby Natural Gas Pipe Line Company of America will be able to increase the volume by 90,000,000 cubic feet per day. Somewhat more than half of that has already been made available to the Peoples Gas

Light and Coke Company. This contract has been helpful to the company and also to the pipe line system in its financing problems.

Also, under the contract additional quantities of gas are purchased at various prices on a commodity basis for resale on an interruptible basis as boiler fuel for the large industrial enterprises and some utilities. If the pipe line company starts the gas in motion through its lines and it is still being extracted from the earth, there must be an outlet on the other end. Therefore, in order to assure that outlet, the rate has been made low enough to cause it to move, as we have already indicated.

In addition to selling the gas which it contracts to receive from the Natural Gas Pipe Line Company to Peoples Gas Light and Coke Company, Chicago District Pipe Line Company also sells to certain subsidiaries of Commonwealth Edison, namely, the Public Service Company of Northern Illinois, Western United Gas and Electric, and Northern Indiana Public Service.

Peoples also purchases surplus coke oven gas from Youngstown Sheet and Tube. It buys its coal from Peabody Coal Company, a coal company operating in the state of Illinois, which has its own railroad, extending from the coal fields to Chicago.

PHYSICAL PROPERTIES

The plants of the Peoples have a daily capacity of 25,000,000 cubic feet of coke oven gas or 132,500 therms. They have a daily capacity of carburated water gas in the amount of 114,200,000 cubic feet or 605,260 therms. The total daily capacity is 139,200,000 cubic feet, or 737,760 therms of manufactured gas.

Its storageholder capacity is not quite equal to one day's production on a cubic foot basis, being 100,700,000 cubic feet. On a therm basis, it is slightly over a day's capacity, 805,600 therms.

In this connection it will be interesting to contrast the problem of an electric light and power company with a gas company. The electric light and power company cannot store its product. It is not a feasible thing to do. It is true that from an engineering point of view it can be done, but from a practical and financial point of view it is not warranted. Therefore, electrical energy is generated as used. Hence, the system must always have capacity to meet any maximum peak load, no matter how short a period of time is involved.

On the other hand, in the case of a gas company, the practical equivalent of a day's requirement can be stored. Therefore, the total investment in plant in relation to the peak load can be relatively lower since the plant investment can be working more efficiently and at higher capacity.

In other words, the load factor may be higher in the case of a gas company than in the case of an electric light and power company.

Returning to our discussion of the physical properties, the miles of main owned or leased are 3,592. The number of meters in operation is 878,000, although the company owned about 913,000. The gross plant and property account at the end of 1945 was \$159,300,000, whereas in 1937 it was \$155,200,000, an increase of slightly over \$4,000,000. This does not represent a very substantial increase in that period; however, the company has written off a considerable amount of its plant.

OPERATING DATA

Relative to the operating data, which are shown in Table 10, we shall indicate a few items that are used as special tests and considerations when analyzing a gas company. Population, as we have stated repeatedly merely shows trend. Miles of main, we will observe in this particular case, have decreased slightly. It is impossible to determine why this is so, unless the basis of reporting has changed slightly. It might be that part of the so-called main line is no longer regarded as main line.

TABLE 10
Operating Data
PEOPLES GAS LIGHT AND COKE COMPANY

Year	Population (000s)	Miles of main	Population per mile of main	Meters per 100 popu.	Meters per mile of main	Sales mil. therms	Revenue per mile of main
1932	3,475	3,728	932	28	236	309.6	\$ 9,144
1937	3,500	3,600	1044	25	241	549.3	12,100
1940	3,700	3,600	1028	23	231	764.8	11,600
1945	3,750	3,592	1044	23	244	914.9	12,293

The population per mile of main has remained more or less constant, and the figure of slightly more than 1,000 is regarded as rather dense. From the viewpoint of a gas company, the greater the density the better. As we pointed out in the case of an electric light and power company, and even a telephone company, that may not be true, as sometimes there is a factor of increasing costs. That is not so prevalent in the case of a gas company, provided it has laid a sufficiently large main to take care of the increase.

The national figure for the number of meters per 100 population is supposed to be in the neighborhood of 18 to 25 per 100. The figure for this company compares closely to the national average, with one meter

to slightly over four persons. If it is possible to have more output with fewer meters, of course, that is desirable, since if each meter user uses more gas various cost factors are reduced.

The meters per mile of main have shown a slight increase. Sometimes instead of using the number of meters per mile of main we use the number of customers per mile of main. Those terms cannot be used interchangeably, however, because occasionally a customer may have more than one meter.

The sales in millions of therms showed a marked increase. In 1931 natural gas was introduced, and we see in 1932 that nearly 310,000,000 therms were sold. This was increased to 765,000,000 in 1940 and 915,000,000 in 1945.

The revenue per mile of main is high, but this figure is considerably lower, for example, than that of Brooklyn Union Gas. One of the reasons we could expect it to be lower is that a much larger percentage of the total load consists of industrial use where the rates are low, and, therefore, the revenue in relation to the miles of main would be lower.

Revenue per mile of main reflects population density rather than high gas rates. Hence it would be erroneous to attempt to compare the revenue per mile of main of two companies when the basic factors were substantially different. In Chicago the rates are lower. Therefore, with the same output, the revenue per mile of main would be substantially less than in Brooklyn, for instance, where the rates are higher. The revenue per mile of main, however, taking the country as a whole, ranges around four to five thousand dollars, which would indicate a sparsely settled area in contrast to the situation in Chicago. Obviously, the revenues per mile of main for this company are greatly in excess of the national standard.

FINANCIAL ANALYSIS

Let us turn next to the balance sheet which is shown in Table 11. We consider the plant and property on a depreciated basis and find that this item constitutes 74.5 per cent of the total assets in 1945. The other investments comprise 5.2 per cent of the total, and current assets 20.3 per cent. On a depreciated basis the current assets look relatively high. If we were to take plant and property on a gross basis, the percentage of current assets in relation to total assets would be more in keeping with what we stated as a standard; that is, in the neighborhood of 10 per cent.

The long-term debt is low, 36.8 per cent in 1945. The company, since 1932, has reduced its indebtedness from about \$93,000,000 to slightly less than \$60,000,000. In that same period of time it has reduced its fixed

charges about 60 per cent, partly through debt reduction and partly through refunding at lower interest rates.

TABLE 11
Balance Sheet
PEOPLES GAS LIGHT AND COKE COMPANY
(millions)

ASSETS	1937		1945	
	\$	%	\$	%
Plant and property	\$155.2		\$159.3	
Less depreciation	25.0		38.0	
Net plant property	\$130.2	76.0	\$121.3	74.5
Other investments	14.5	8.6	8.4	5.2
Current assets	17.3	10.1	33.2	20.3
Deferred debits	9.1	5.3	.1	—
Total assets	\$171.1	100.0	\$163.0	100.0
LIABILITIES				
Long-term debt	\$ 78.2	45.7	\$ 59.6	36.8
Current liabilities	11.4	6.7	20.3	12.5
Deferred misc.	4.9	2.8	2.7	1.7
Capital stock	66.7	39.0	65.6	40.0
Surplus	9.9	5.8	14.8	9.0
Total liabilities	\$171.1	100.0	\$163.0	100.0
Current ratio	1.52:1		1.63:1	

Thus, the company has very materially improved its capital structure and reduced its fixed charges since 1932: This, of course, improves the investment quality of the bonds and also the stock.

The surplus is small, although in years gone by it was very large. One of the reasons for the present size of the surplus account was the necessity of writing off about \$52,000,000 at the direction of the Federal Power Commission, a good part of which was written off against the old surplus account. This requirement was made of the company partly because of the tremendous deflation that occurred in the market value of the securities in its investment account which had been acquired when it was a part of the Insull system. It should be noted that the surplus account has shown a satisfactory increase for the years shown.

The current ratio of 1.63 to 1 is adequate, as we have noted that a company of this type, because of the nature of its business, does not require a high ratio.

TABLE 12
Profit and Loss Statement (consolidated)
 PEOPLES GAS LIGHT AND COKE COMPANY
 (\$ millions)

	1937		1945	
	\$	%	\$	%
Operating revenues	\$40.6	100.0	\$44.2	100.0
Operating expenses	35.5	87.4	39.0	88.2
Net operating revenues	\$ 5.1	12.6	\$ 5.2	11.8
Other income	1.8	4.4	1.0	2.2
Gross income	\$ 6.9	17.0	\$ 6.2	14.0
Fixed charges	4.5	11.1	2.6	5.9
Net income	\$ 2.4	5.9	\$ 3.6	8.1
Dividends	1.3	3.2	2.6	5.9
Surplus	\$ 1.1	2.7	\$ 1.0	2.2

With reference to the profit and loss statement shown in Table 12, we have already observed that the high point in the operating revenues was reached in 1940, when it amounted to \$44,900,000. In 1945 operating revenues were \$44,200,000. There is probably little reason for expecting any material decrease in the operating revenues from the present levels.

Probably the chief cause of a reduction would be rate reduction when, as, and if imposed by the regulatory bodies. However, a reduction of some \$450,000 for any year would not be a very large item in comparison with operating revenues of over \$44,000,000. The growth trend in the area should tend to compensate for rate reduction and any normal loss of industrial customers. It is probable that the same growth trend that has been experienced in the past will continue into the foreseeable future, at least.

The operating ratio of 88.2 per cent is high, but it is characteristically high for gas companies in general as compared with electric companies.

The company was able to carry down to net only 8 per cent, or 8 cents out of every dollar received, which is a very low percentage. Because of that low percentage the stock has a speculative aspect that would not exist if that figure were relatively higher. On this basis a comparatively small change in the net results would wipe out all of the income available to the stock. We would prefer to have net profits of about 15 per cent of operating revenues instead of 8 per cent.

Let us consider some of the percentages and ratios that are tabulated in Table 13. Some of these we have already spoken about.

As was explained previously, we are interested in the first two percentages, fixed assets to total assets and current assets to total assets, because those two percentages very largely constitute the rate base.

TABLE 13
Balance Sheet Proportions
PEOPLES GAS LIGHT AND COKE COMPANY

	1933	1937	1940	1945
Fixed assets/Total assets	74.2%	79.2%	81.0%	74.5%
Current assets/Total assets	5.0	8.8	10.8	20.3
Long-term debt/Total assets	42.7	39.9	36.5	36.8
Current liabilities/Total assets	5.6	5.8	5.7	12.5
Capital stock/Total assets	31.5	34.0	34.4	40.0
Surplus & cap. reserves/Total assets	5.4	5.8	6.3	9.0
Current ratio	18:1	15:1	19:1	16:1
Fixed & current assets less depr. res. (millions)	\$160.8	\$143.9	\$136.9	\$154.5
Stocks & bonds (millions)	\$160.8	\$144.9	\$135.2	\$125.2

The question arises as to why we take current assets rather than the excess of current assets over current liabilities, or the net current assets, in determining the rate base. Generally speaking, we will find that the commissions allow the current assets rather than the net current assets. The great percentage of current assets is supplied not by current creditors but by long-term creditors and stockholders, either in the form of bonds and stocks or the accumulation of earnings. The type of current liabilities that we see in a utility consists of salaries and wages accrued and very little of accounts payable, accrued interest, dividends declared, and taxes.

There is a comparison in Table 13 of the fixed and current assets less depreciation to the amount of stocks and bonds outstanding. We note that this relationship improved progressively, in 1945 the situation being better than in any of the years shown. In that year the rate base, taking the book values, was \$154,500,000 against stocks and bonds outstanding of \$125,200,000. If we had deducted the current liabilities of \$20,300,000, we would have a balance of \$134,200,000, as compared with \$125,200,000 for the capitalization. The indication, then, is that in relation to the value of the properties used and useful in the public service the capitalization is sound. We have already stated that the ratio of the bonds to the total capital structure is low; therefore, from these points of view, the bonds should be of good quality.

Let us now consider the bonds, of which there were slightly less than \$60,000,000 outstanding on December 31, 1945. The Series E, F, and G bonds are all placed with insurance companies. The Mutual Fuel Gas bond, assumed by Peoples Gas Light and Coke, is the only one that is outstanding in the hands of the public, and that is now a very small issue.

The three large issues are callable, they are secured by a first mortgage, and they have sinking fund provisions of 1½ per cent per annum.

The Mutual Fuel Gas 5s of 1947, listed on the New York Stock Exchange, are not subject to call. They are secured by a first mortgage, but there is no sinking fund provision. The price range and yield in certain years is indicated in Table 14. This issue has had its fixed charges earned slightly over two times since 1941. We have given the

TABLE 14

*Securities of the Peoples Gas Light and Coke Company***A. Bonds: \$59,606,000 as of 12/31/45:****1. Long-term debt:**

Peoples Gas Light & Coke:

1st & Ref. Mtge 3¼s, Series E, 1966—\$22,000,000

1st & Ref. Mtge 3s, Series F, 1956— 15,000,000

1st & Ref. Mtge 3s, Series G, 1961— 20,000,000

Mutual Fuel Gas Co. 1st Mtge 5s, 1947— 2,606,000

All of the foregoing issues were sold privately to insurance companies with the exception of the Mutual Fuel Gas 5s, 1947, which were assumed by Peoples.

2. Provisions:

a. *Series E, F, & G*—Sold privately to insurance companies.

Callable: Yes.

Security: First mortgage.

Sinking Fund: 1½% per annum of maximum amount outstanding.

b. *Mutual Fuel Gas 5s, 1947*—on N.Y.S.E.

Callable: No.

Security: First mortgage.

Sinking Fund: None.

3. Price range and yield to maturity: Mutual Gas 5s, 1947:

	1938		1940		1945	
		%		%		%
High	116	2.97	120	1.92	109	0
Low	112	3.43	112	3.07	106	1.35
Average	114	3.20	116	3.00	107½	.47

4. Interest coverage after taxes:

	1938	1939	1940	1941	1942	1943	1944	1945
Times earned	1.47	1.64	1.80	2.19	2.27	2.23	2.05	2.45

B. Common stock as of 12/31/45: \$100 Par; 656,000 Shares:

	1932	1935	1937	1940	1941	1942	1943	1944	1945
Earnings	\$6.20	1.61	3.65	4.63	6.53	6.10	5.62	4.67	5.47
Dividends	\$6.50	—	2.00	3.00	5.00	4.00	4.00	4.00	4.00
Price range									
High	121	44	66	43	54	47	62	70	97
Low	39	18	22	23	37	36	46	55	69
Average	80	31	44	33	46	42	54	63	83
Yield-avg	8.12%	—	4.55	9.10	10.85	9.52	7.41	6.35	4.82
P/E Ratio-avg	12.9	19.3	12.1	7.1	7.0	6.9	9.6	13.5	15.2

bond an A rating, which is probably a very conservative rating since, in the first place, it is a first mortgage and, in the second place, a very small

issue. There can be little difficulty in meeting the interest on the obligation, and certainly the property is more than adequate to take care of the claim; from that viewpoint it could be given a higher rating.

There are 650,000 shares of common stock outstanding with a par value of \$100. The earnings of this stock have been somewhat erratic, and for a few years, 1934, 1935, and 1936, no dividends were paid. Every year, however, there were earnings, but during this period the company was experiencing difficulty in writing down assets to reflect the great loss that had taken place, particularly in connection with some of its security holdings. Therefore, it was necessary to apply earnings to surplus.

C. PUBLIC UTILITY HOLDING COMPANIES

In view of its great importance in the public utility field, no discussion is complete without consideration being given to the public utility holding company.

DEFINITION

In a very broad sense, any corporation that holds stock of one or more other companies may be considered a holding company. However, we usually apply the term *holding company* only to corporations holding effective working control of one or more other corporations through ownership of voting stock in those corporations. Such control may be exercised through the ownership of a majority of the voting stock of the *subsidiary*. For example, if corporation A owns more than 50 per cent of the voting stock of company B, company A is considered to be a holding company. From a practical point of view, however, it is frequently necessary to own less than a majority of the voting stock in order to exercise effective control. If the balance of the voting stock is widely distributed, the ownership of a substantial minority is often sufficient for working control and we consider the company exercising such control to be a holding company. It should be mentioned, however, that most companies do not regard subsidiaries as being fully controlled, and they are not included in consolidated financial statements, unless a substantial majority of the stock is owned. Some companies insist on at least 75 percent ownership before the financial statements of the subsidiaries are included in the consolidated report.

When the Public Utility Holding Company Act was enacted in 1935, provision was made whereby public utility holding companies were placed under the jurisdiction of the SEC. For this purpose public utility holding companies were defined to include "any company which directly or indirectly owns, controls, or holds with power to vote, 10 per centum or more of the outstanding voting securities of a public-utility company or

of a company which is a holding company . . ." In addition, the act provides that it is within the discretion of the SEC to apply the provisions of the act to *persons* exercising such a controlling influence if it is necessary or appropriate in the public interest or for the protection of investors or consumers.

Thus, in effect, any corporation or person owning 10 per cent or more of the voting stock of an electric light and power or gas company is regarded as a holding company. The reason, no doubt, for placing the percentage at such a low figure was the conviction on the part of Congress that a closely held minority could, for all practical purposes, control a utility to the extent that it could dominate its management, its policies, and so forth.

In the public utility field we have *pure holding companies* and *holding-operating companies*, or *parent companies*. The distinction here is that the pure holding company does not directly operate any utility property; it merely directs, supervises, or controls the operation of its affiliated operating companies. The parent, or holding-operating company, on the other hand, not only controls other operating companies, but also functions as an operating company itself.

HOLDING COMPANY CONTRIBUTIONS

Holding companies have made many contributions to the public utility industry; in the development of that industry we might even say that their services were indispensable.

The electric light and power industry, in particular, was largely in a chaotic condition prior to the development of the holding company concept with its related practices. Small local companies, dissociated from other companies, operated in individual communities. They had weak financial backing. Their securities were not widely distributed. Their credit was poor. They could not attract or develop efficient, competent, and informed management simply because they could not offer adequate salaries.

The general result was that the type of service rendered was poor. If anything happened to a plant, it was usually necessary for the customers to go without service until the necessary repairs could be made. This problem was especially serious with small hydroelectric plants, since floods, for example, could and often did cause extensive interruptions in the service of the affected community, lasting at times for many days. In addition, rates were high because of the high cost of rendering the service. The rates being high, the usage was low. In fact, the whole situation was not conducive to the utilization of electrical energy to the great extent that such utilization has been developed at the present time.

With full recognition of the abuses that developed in connection with public utility holding companies, it can be accurately said that the holding companies have been mainly responsible for developing the industry to its present high level.

The holding companies made a definite contribution to the industry from a financial point of view. With the unification and integration of many of these small local units, the financing of the industry on a large scale was made possible. On this basis the large investment bankers became interested in the financial organization and policy of the companies. The credit of a large organization was substituted for the credit of many small organizations, and it became possible to obtain adequate financial help at lower cost. In addition, the holding companies in many cases supplied the funds for the common stock financing of the operating units.

Another contribution was in the engineering field. The small operating companies were financially unable to employ competent engineers who were abreast of the latest developments in the industry. Therefore, in many cases this incompetency was reflected in the quality of their plants and the efficiency of their operations. With the establishment of the holding company, the organization of an engineering department staffed by highly trained and competent engineers was made possible. In some instances a separate and distinct subsidiary company was formed for this purpose. In any event, the services thus provided were made available to the operating companies on a scale and of a quality that they were unable to provide for themselves.

Closely related to the engineering facilities that the holding companies furnished was the supervision of the general management that they provided. The managerial policies and techniques developed by the larger companies were passed on and applied to the various subsidiaries, thus greatly increasing the effectiveness of their management.

Considerable advantages also accrued to the operating companies in connection with the legal services furnished by the holding companies. It is obvious that a large organization backed by the assets of an entire system could employ the finest legal counsel available. In that way many of the legal difficulties that were experienced by the smaller companies were, as far as was possible, eliminated or minimized. In view of the possible complications which might arise of contractual obligations, the problems involved in dealing with regulatory bodies, and the potential and actual embarrassments in connection with franchises, the legal help contributed by the holding companies was extremely important.

In a similar manner, the accounting practices were improved by the centralized control established by the holding companies. The classifica-

tion of accounts and the establishment of uniformity within the systems made possible the provision of information essential to intelligent management. While it is true that the regulatory bodies were an extremely important factor in establishing uniform systems of accounts, the holding companies themselves made a contribution in this respect.

Substantial economies were achieved through centralized buying and inventory control. We are well aware of the savings that can be had when purchases are made on the basis of large quantities. In addition, it became possible to establish standards applicable to the quality of the material purchased and to achieve a high degree of uniformity. Thus, there was an improvement in quality as well as a saving in cost.

Centralized inventory control made it possible to reduce inventories. Prior to the advent of the holding company, it had been necessary for each operating company to carry a considerable amount of extra parts and equipment. In other words, it was necessary for them to have on hand a duplication of facilities, at least strategic parts of those facilities. This was done in order to assure continuous service or, more specifically, to reduce delay to a minimum in the event that service was interrupted. Obviously this involved a large inventory that was, for the most part, idle—merely a standby reserved to meet possible contingencies. Under the holding company arrangement, it became possible to place the larger reserve units at key points and have them readily available to any one of a number of plants that happened to require emergency aid. On an over-all basis, therefore, much smaller inventories were possible.

The interconnection of previously isolated operating properties was largely brought about through holding companies. In this manner, the various properties owned by one holding company were tied together, when geographically possible, in a connected system. The advantage of this interconnection is obvious, since if one plant in the system found it necessary to shut down or faced a sudden and unexpected demand beyond its capacity, it could be aided immediately by the transfer of electrical energy from one or more of the other plants in the system.

The result was a higher degree of dependability of service and a reduction in the reserve capacity necessary to the individual properties. The reserve capacity of a system, of necessity, is large if it is dependent solely upon its own generating plant. If it is connected with other systems upon which it can draw in time of need, the reserve capacity can be lower without in any sense increasing the danger or the likelihood of interruptions in service. For that reason the over-all investment in the system can be lower and the return on the investment higher. Likewise, the customer is benefited through a reduction in the investment and the cost of rendering service.

There was a tendency, with the development of public utility holding companies, for the large companies to concentrate in certain areas to the exclusion of other holding companies, which concentrated in still other areas. There were, however, two types of development. One type involved a high degree of integration within restricted areas, as illustrated by the North American Company, which had its chief properties in four areas. In contrast, another type of development involved the holding of subsidiaries which were widely scattered geographically. An example of the latter type is the Associated Gas and Electric Company or Engineers Public Service.

When the Holding Company Act became operative, it hit the non-integrated systems, in a sense, more severely than the others, because, under a provision of the act, a holding company operation was to be confined to one geographically integrated system, with only one intermediary company between the top holding company and the operating company. Therefore, companies such as North American, having its chief properties in four areas, could break them up into four large units to a much better advantage than could some of the holding companies with widely scattered properties.

HOLDING COMPANY ABUSES

In contrast to the many valuable contributions which the public utility holding companies made, certain abuses were alleged to have been practiced, the more flagrant of which led to the passage of the Public Utility Holding Company Act of 1935.

One of the more important abuses generally attributed to the holding companies was that they very frequently acquired properties for which the purchase price was excessive. Since the holding companies went through a period of rapid expansion during which there was a high degree of competition and rivalry in connection with the acquisition of additional units, it is undoubtedly true that frequently the prices paid for the stock of operating companies were out of line with reasonable values, and that, in terms of the original cost concept, they were frequently excessive. The result, of course, in such a case was that the capitalization of the holding company, issuing its own securities on the basis of the cost of the subsidiary's stock, tended to become inflated.

The Federal Trade Commission made an extensive investigation of the industry and in its voluminous report included, among the abuses pointed out, the acquisition of properties at excessive prices. It was also alleged that some of the holding companies engaged in the practice of writing up or revaluing the assets of the subsidiaries, as they were acquired, to form the basis of increasing the capitalization of the subsidiaries and con-

sequently the issuance of greater amounts of securities by the holding companies. It was felt that these securities were not supported by adequate assets, and no doubt there were many important instances in which this was true.

For example, one company was asserted to have written up its acquisitions by something like \$500,000,000. Another company that was recently separated from one of the holding company units was compelled by the Federal Power Commission and the SEC to write down its assets to the extent of about \$60,000,000. Electric Power and Light, in connection with its acquisition of Utah Power and Light, was asserted to have inflated values around \$33,000,000, all of which was regarded more or less as stock watering, and which the Utah Power and Light Company eliminated with the separation of its properties from the Electric Power and Light System.

Another abuse that the Public Utility Holding Company Act attempted to correct involved the charging of what were regarded as excessive fees for the services rendered to the subsidiaries by the holding companies. These service fees were attacked for years by the various public utility commissions, and in many cases without any apparent success. It was asserted that the fees did not tie up directly with the cost to the holding company of rendering the various services. Frequently, charges were made on the basis of a certain percentage of the gross revenues of the subsidiary and definitely became a source of profit to the holding company and helped to support the inflated capitalization.

These fees, then, were attacked by the regulatory bodies and have also been attacked severely by the Securities and Exchange Commission. In some instances, the service departments or service divisions of the holding companies have been greatly reduced, if not, indeed, eliminated. Such fees have been reduced to a cost basis or at least to a supposedly reasonable basis.

Another abuse was found in so-called *up-stream financing*. We have indicated that the parent company frequently rendered financial aid to its subsidiaries, thereby helping to place them on a sound basis.

Often the parent company would grant a loan to a subsidiary until it could complete a plant. The subsidiary then would mortgage the plant in order to complete the financing, being able on that basis to finance at a lower interest rate since it is easier, as we know, to sell a mortgage bond than it is to sell a debenture based on hoped-for and projected assets which are to be constructed in the future. That was a real contribution on the part of the parent company, and after the subsidiary sold the issue, it would pay off the loan to the parent company.

As time went on, however, these operating subsidiaries became stronger

financially than the parent company. Thus, instead of the parent company granting loans to the subsidiaries, the subsidiaries granted loans to the parent company. This practice was referred to as up-stream financing, and in connection with this practice certain abuses developed.

It is important to note that the public had little control over the holding company. It was not subjected to regulation by the public service commissions because it did not operate, it merely held securities in the operating subsidiaries. It was the operating subsidiary that was regulated. However, if, through stock ownership, we cause that subsidiary to grant loans to the parent company and in a sense impair its own capital structure and its credit standing, we then render an injustice to the public.

Allied with this practice was that of bleeding the subsidiaries. The holding company would issue bonds, preferred and common stocks, which could be supported only through the revenues derived from its ownership of the securities of the subsidiaries, and those securities for the most part consisted of the common stocks of the various subsidiaries. Hence, there was always the possible tendency to overstate earnings, to make inadequate depreciation charges, to skimp on maintenance. Instead of building up a satisfactory backlog and improving the credit standing of the subsidiary, instead of maintaining and modernizing its investment, the available funds would be passed on to the parent company so that they might be used to pay the interest on its outstanding bonds and dividends on the stock.

As we know, when the holding companies were going through this program of expansion, they were constantly in the market with new offerings in order to finance the expansion. In order to attract possible purchasers, they had to show earnings to support the bond and stock issues. It is now generally recognized that this was a serious abuse. From the viewpoint of sound finance, the company should, in the first place, state its earnings conservatively, that is, after proper maintenance and adequate charges for depreciation, so that the capital investment might not be impaired. All necessary types of reserves, particularly valuation reserves, should be provided for, and a reasonable amount of the earnings should be reserved or conserved to build up the subsidiary itself. Obviously, it was difficult to observe sound and conservative principles in view of the great need of the parent company for earnings to support inflated security values. While this abuse was, in a sense, widely practiced, some companies, of course, did a better job than others in this respect. The North American Company, for example, is generally considered to have been fairly conservative in setting up its subsidiaries and in operating them.

These abuses of which we have been speaking were largely brought out in the Federal Trade Commission's investigation of the industry, the report of which is available. Many volumes concerning these problems have been published in subsequent years, which also are available to anyone desiring more information on the subject. Obviously, we have been able to merely touch on this whole question in a very brief manner.

PUBLIC UTILITY HOLDING COMPANY ACT OF 1935

In any event, it was apparent that the abuses had reached a stage and condition where something should be done about them. The holding company was not subject to regulation; therefore, it could do things that its operating subsidiaries could not do. If the regulatory body were to say to the operating company, "You must set up a certain type of capital structure having a certain percentage in bonds, preferred stock and common stock," it could impose that requirement on the subsidiary, but it could not impose a comparable requirement on the holding company. It had no jurisdiction. The holding company became, in a sense, an instrument capable of circumventing desirable regulation. As a remedy for this situation, the Public Utility Holding Company Act of 1935 was enacted by Congress. We do not intend to present a full discussion of the Holding Company Act and its many ramifications; however, we shall mention briefly some of the important points involved simply for background purposes.

The act applies to electric and gas holding companies which are placed, thereby, under the supervision of the Securities and Exchange Commission. The requirement that these companies register with the SEC was complied with by most companies, but with silent protest. However, Electric Bond & Share vigorously opposed registration, contesting the constitutionality of the Act, and so on. After extensive litigation, the Supreme Court ruled that the Act in this respect was not unconstitutional, and therefore, all holding companies must register with the Securities and Exchange Commission.

The SEC is given jurisdiction over a number of things; however, probably the most serious provision of the Act, certainly from the viewpoint of the holding company, was the so-called *death sentence*. This provided that after January 1, 1938, these large holding companies must divest themselves of all their holdings with the exception of properties in an integrated area and of one other company. This latter has been rigidly interpreted to mean some business that is closely allied or essential to the operation of the main business, a closer interpretation of the Act than the holding companies thought Congress intended at the time it passed the legislation.

Since January 1, 1938, many of the holding companies have tried in every conceivable way to delay and even prevent the operation of the death sentence, which is only natural. But despite their vigorous protest and delay, a great deal of progress has been made in the divestment of these subsidiary companies, breaking them up into their respective units, and dissolving the holding companies. Dissolution has not reached the final stages to any extent, but that is the objective and that is the trend.

It is the feeling in some quarters that, despite the fact that the Securities and Exchange Commission has been extremely strict in its interpretation of the Act and its requirements, it has been lenient, realistic, and practical in its application of the death sentence; that it has not required summary divestment of the holding companies which would have destroyed values very substantially; that it has worked along with the companies in their efforts to dispose of the properties in an orderly fashion. This has made possible some trading as among the systems, enabling them to organize these units on sound financial bases whereby they will be able to operate as independent units and in an efficient manner, both to the advantage of the consumer and the security holder. In fact, it has been one of the requirements of the Securities and Exchange Commission that, when a holding company divests itself of one of these units, it must place that unit in a sound position and condition so that it can go on operating and not have to revert back to those objectionable conditions that were extant before the development of the holding company.

It was felt and asserted by many that the outcome would be a great destruction of security values. It seems, however, that the experience is to the contrary, that instead of the net result being a disadvantage to the security holders it proved to add to their values and they are better off, as a group, than if there had been no death sentence or divestment. It would further seem that this has been reflected in the market prices of the securities, with certain exceptions.

It is interesting to note that the constitutionality of the death sentence provision, which had been challenged in the courts, has finally been upheld by a recent decision of the United States Supreme Court.

The Natural Gas Act of 1938, in a sense, augmented the powers of the SEC and, of course, gave additional power to the Federal Power Commission. Under the Natural Gas Act, all natural gas in interstate commerce is placed under the control of the Federal Power Commission, and the Securities and Exchange Commission was given certain jurisdiction in connection with the offering of securities by companies engaged in this business. The effect has been to provide for the regulation of holding

companies in this field which were previously not subject to the control of any regulatory body.

ADDITIONAL POWERS OF THE SEC

In addition to the powers granted to the SEC in connection with the death sentence and the additional jurisdiction granted by the Natural Gas Act of 1938, the Commission has jurisdiction over a number of other extremely important matters. For example, the SEC has the power to approve or disapprove the issuance of securities by holding companies or their subsidiaries. It has the power to approve or disapprove of the acquisition of subsidiaries by a holding company. It has the power to require the simplification of corporate structures and, in some instances, to require recapitalization. It also has control over intercompany loans and other intercompany transactions. And, in addition, it has certain powers in connection with dividend policies, depreciation reserves, and so forth. While this is by no means a complete enumeration of the powers granted by the Act, we may consider these to be among the leading features and an indication of the breadth of these powers.

Considerable controversy exists over the practice of competitive bidding which is now required by the SEC in connection with the issuance of public utility securities, with certain minor exceptions. While this subject will be discussed more fully in a subsequent section, we may point out that the general assertion in favor of competitive bidding is that the issuing company obtains its funds at the lowest possible cost and that so-called *banker control* is eliminated. As opposed to this assertion it might be said that the investor might be paying too high a price for the security he buys and that the issuing corporation loses the specialized and expert services of the investment banker in arranging its financing. Without further considering the many arguments for and against competitive bidding at this time, let us say that the question of whether or not competitive bidding is advantageous, from the point of view of the public interest, is subject to dispute. Despite this fact, however, the SEC does require that offerings be subject to competitive bidding in the great majority of cases.

REVIEW QUESTIONS

1. What sources of information provide data helpful in making analyses of public utilities?
2. Indicate what factors are considered in analyzing:
 - (a) The territory served.
 - (b) Management.
 - (c) Franchises.
 - (d) Regulation of rates.
 - (e) Company history.

- (f) Properties.
- (g) Operating data.
- 3. In making an analysis of the balance sheet of a utility, indicate what significance is attached to:
 - (a) Trends of comparative balance sheet figures.
 - (b) Ratio of net fixed assets to total assets.
 - (c) Ratio of funded debt to capitalization.
 - (d) Ratio of funded debt to fixed assets.
 - (e) Ratio of funded debt to depreciated plant.
 - (f) Current ratio.
 - (g) Relationship of rate base to total capitalization.
- 4. What is the significance of the operating ratio?
- 5. Why should income taxes be excluded when computing the operating ratio of a public utility?
- 6. What has been the general trend in operating ratios for public utilities in recent years?
- 7. What was a representative operating ratio for a public utility in 1937? In 1946?
- 8. Of what significance is the gross income figure?
- 9. In analyzing trends, why is it essential to consider gross income and the operating ratio jointly rather than individually?
- 10. What principal factors are considered in evaluating the investment quality of the bonded debt of a public utility?
- 11. What principal factors are considered in evaluating the investment quality of common stock of a public utility?
- 12. What are the approximate national averages of:
 - (a) Number of gas meters per 100 population?
 - (b) Revenue per mile of gas mains?Of what significance are these ratios?
- 13. What is considered to be the standard per cent of current assets to total assets for a public utility?
- 14. What is considered to be the standard per cent of net profits to gross revenues?
- 15. In establishing rate bases, which do commissions generally include: current assets or working capital? Why?
- 16. What constitutes a holding company under the provisions of the Public Utility Holding Company Act of 1935?
- 17. Distinguish between a pure holding company and a holding-operating company or parent company.
- 18. What contributions have been made by holding companies to the public utility industry?
- 19. What were the important abuses generally attributed to holding companies?
- 20. Of what significance was the Natural Gas Act of 1938?
- 21. What powers does the S.E.C. possess with respect to public utility holding companies?
- 22. What are the arguments for and against competitive bidding?

RAILROAD SECURITIES

by Dr. Mason Bogen, *Investment Counsellor,*
Hentz & Co.

SINCE THE HISTORY of the railway industry dates back a little over a century, we will find that a study of rails will be different from a study of the public utilities industry or such industries as oil, steel, automobiles, and the like, which have had a much shorter life. This relatively greater age of the railroad industry is responsible for a great many characteristics peculiar to railroad securities.

PERIOD OF EXPANSION

The growth of the railroad industry may be divided into three periods. The first period was the period of rapid expansion which started, roughly, about the year 1825. Cable railroads, such as the Delaware and Hudson built in 1816, preceded that date. Likewise, a number of railroads running horse-drawn vehicles on rails antedated the present steam locomotive. However, the New York Central was the first important road to use the steam engine in 1830, and from that point on expansion was rapid.

The reason for the great development of railroad mileage in this country is to be found in the size of the country and its rich natural resources. Transportation, as we know, constitutes a very important aspect of economic life. If we stop to think of where our coal and oil supply is located in relation to its ultimate use, we will readily see that without an adequate transportation system, be it railroads, trucks, pipe lines, or aircraft, the economic life of the country would come virtually to a standstill. Because of the many different materials used in any given area, we find that it is necessary to acquire those materials over the length and breadth of the land, with coal, for example, coming largely from the mines of West Virginia, Kentucky, Illinois, and Indiana (we are referring to industrial coal) and oil coming largely from Texas, Oklahoma, and California.

The need for overland transportation as the country pushed westward

caused the railroad industry rapidly to assume a role of major importance in the economic life of the country, and, for the better part of a century, investment securities, that is investments in securities other than governmental obligations, consisted largely of railroad stocks and bonds.

The cost of transportation, at the time the railroads were first built, was unbelievably high. We have come to regard wages and other prices as having taken a steady upward trend in the last century. Therefore, we are often surprised to find that the average ton-mile rate for moving freight at the time the railroads were first under construction amounted to about twenty cents, whereas at present, over this vast network of railroads, amounting today to about 240,000 miles, freight is moved at an average ton-mile rate of something under one cent.

By 1910, we find that the first period—the great period of railroad growth and expansion—had about come to an end; that over 200,000 miles of railroad had been built; that, in many instances, competition was extremely keen among the railroads; and that a certain amount of overexpansion had already taken place. There had been periods of boom during which railroad mileage was built at a terrific pace simply because plenty of money was available for this industry that was showing constant growth.

PERIOD OF COMPETITION

The first World War brought a change in the whole scheme of transportation. It was not readily apparent at that time, but, just as in World War II we have had a tremendous development of aircraft which is bound to exercise a very great influence upon certain classes of railroad transportation in the future, so the development of the gasoline engine and the wide use of trucks during the war were to exercise a pronounced influence on the railroad industry in the postwar period. Thus, the 1920's marked the beginning of very active competition for the railroads from new forms of transportation.

Those who were following the stock market boom at the time paid little heed to that development, as was indicated by the fact that railroad stock prices, while not pacing the industrials at the time, did reach boom levels in 1929, the averages exceeding any price attained prior to that year. We mention this because total railroad gross revenues did not reach a peak in 1929. Passenger business was already declining. Compared with 1920, an active postwar year, passenger revenues had declined by about one third. The small increase in freight revenues shown during the boom years was due to the fact that what the roads gained from the movement of building materials, for example, as well as the movement of

an increasing volume of durable consumer goods, they were losing through the diversion of a substantial amount of light freight to trucks.

Underground a large network of pipelines was being built. Those who wish to trace the history of transportation of oil will find that, during the early 1920's when the huge fields were opening up in Texas and Oklahoma, the railroads received the bulk of the crude oil business. By the late 1920's, however, enough pipelines had been constructed so that most of this business had been lost. By the 1930's, the distribution of gasoline through large pipelines directed to large marketing centers was already an accomplished fact, and a large number of arteries were being constructed from these major centers to smaller centers. Thus, the railroads, in the 1930's, were rapidly losing their gasoline business in addition to having lost their crude oil business during the 1920's.

The airplane did not become a factor until the 1930's, and up until the advent of World War II was mainly a factor in the movement of first-class passenger traffic and of mail and express, although in connection with express it was relatively a minor factor.

Therefore, when World War II broke out, the railroads no longer held a monopoly of transportation. In the movement of such commodities as livestock, for example, they had lost some 50 per cent of their volume to highway vehicles. This, in turn, changed the whole system of marketing livestock. Whereas, previously, a rancher in Montana would send his livestock to Chicago to be sold, a lot of intermediate markets sprang up in the West to which the rancher would truck his livestock and where packing house plants slaughtered for local consumption or consumption west of the Mississippi.

A comparable change occurred in the shipping methods of the automobile industry. As we know, the lower priced cars were assembled in large numbers at separate points throughout the country rather than in Detroit. One of the main factors fostering this decentralization of processing and production was the fact that trucks could take these finished products and distribute them within a radius of two or three hundred miles without difficulty, which meant that, except in the movement of raw materials or in the movement of parts, the railroads lost out.

THE WORLD WAR II BOOM

The third period of railroad development was the World War II boom period, which came about very unexpectedly.

It is true that when the war broke out it became apparent that the railroads would have to do a considerably larger job than in the preceding decades in the movement of the freight of this country and its passengers. But few people anticipated that the restrictions upon the competing

forms of transportation would be so severe, or that the production of war materials in this country would reach such great heights, that the railroads not only would attain the peak they attained in the boom of the 1920's but would exceed it, both in gross revenues and in the volume of freight. Thus, we see that railroad revenues during the decades of the 1930's and 1940's underwent some very wide swings, attaining a high of over eight billion dollars during the late 1920's, dropping to a low of three billion dollars at the bottom of the depression in 1932 and 1933, and rising to nine and a half billion dollars during the peak wartime year, which was 1944.

Since the use of private automobiles was severely restricted, the movement of passengers returned to the railroads. In the movement of freight, the hazards of coastal shipping and the heavy demands on shipping made it necessary for a considerable amount of gasoline and crude oil to return to the rails. The railroads also regained other types of freight which formerly were moved by highway vehicle. The inability to obtain sufficient trucks and the shortage of rubber and gasoline both contributed to give back to the railroads a much larger proportion of the overland business than they had held at any time, we might say, in the decade preceding the entrance of this country into the war.

Thus it was estimated by the Interstate Commerce Commission that, whereas the railroads were carrying some 70 per cent of the total freight tonnage in this country in the middle 1930's, the percentage rose to approximately 85 per cent during the height of the war production boom. When we add to this the fact that the total production of the country showed a tremendous increase, it is readily understandable why railroad revenues jumped over 200 per cent during this period. Of course the effect upon railroad security prices, upon railroad capitalization, upon railroad funded debt and railroad finances generally was tremendous.

One of the reasons that the railroads followed a course of trying to revamp their capital structures during this period was the very sad experience that they had had during the depression. About one third of railroad mileage went into bankruptcy during the depression years. Another third was on the ragged edge of bankruptcy. It was obvious, then, that when the railroads again enjoyed high earnings they were not going to distribute them as dividends or even spend a great deal on improvements, although they are headed that way at the present time to some extent. To the contrary, they would apply earnings first to the retirement of what had seemed to be excessive debt during the prewar decade and to the building up of their liquid resources so that they would not again be caught as they had been in the early 1930's when they were stretching to pay dividends that they had maintained during the 1920's

even though they were not earned. Thus, the depression experience plus the very high earnings of the war period must be regarded as responsible for the rather revolutionary change which has taken place in the finances of the railroad industry.

POSTWAR OUTLOOK

Let us look ahead briefly over the next few years, possibly for the major purpose of tempering the considerable optimism that exists regarding the future of the railroad industry.

The airlines obtained very large sums of money by borrowing or from the sale of new stocks for the expansion of their facilities. The rapid turnabout of aircraft, whereby they can make at least one transcontinental trip per day and have ample time for servicing the planes for a return trip the following day, is at sharp variance with the needs of the railroads, which require at least three days for a transcontinental trip with one round trip per week. While we might have some fifteen to twenty people occupying a bedroom car, passenger aircraft have accommodations for up to sixty persons. Thus we have in one aircraft the space equal to three or four pullman cars. It would seem clear, then, that competition for first-class passenger traffic in the future is likely to be much more severe than it has ever been before.

As far as the movement of freight is concerned, it would seem that the airlines are not an important factor, at least at this time. They were competitors for mail revenues, and they will probably become competitors for express revenues, which have never been too important for the railroads. Certain types of luxury materials may be moving by aircraft in fairly good volume, such as silk, which used to move by special express from Seattle to the mills in the East. In addition, there will be a substantial volume in the luxury type of fresh fruits and vegetables. And, of course, we will have the usual flow of luxury goods such as fur coats, for example, where even if the rate is fairly high it is an infinitesimal percentage of the total cost of the article, and the advantages of having swift and careful movement by air would be apparent. By and large, however, the large bulk of the freight will continue to be carried by the railroads.

It must be expected, therefore, that what the first World War accomplished for highway vehicles the second World War will eventually accomplish for aircraft. And competition after the first few years of readjustment in the postwar period, at least from the economic standpoint as distinguished from the regulatory standpoint, will be increased. We mention the distinction because we know that in the early 1930's a good deal of the highway competition was not of the fair variety, and there

was a situation of unequal regulations, unequal wages, and unequal organization of labor, which is not likely to recur. Certainly there is no indication of it in the aircraft industry because of the rather rigid control which the Civil Aeronautics Authority exercises over airlines.

GOVERNMENTAL REGULATION

The subject of regulation is as important in the railroad industry as it is in the public utility industry. Public utility regulation, as we know, was left almost entirely to the states until the Roosevelt administration. That was not and could not be true to any great extent in the railroad industry. If we were going to have regulation at all in the railroad industry, the very nature of the industry made it essential that a federal body be put in charge. After a great deal of debate in the 1880's, the Interstate Commerce Act was passed in 1887, and the Interstate Commerce Commission was formed to regulate the railroads and to eliminate many abuses that had become patent in the preceding decade.

These abuses consisted chiefly of favoritism as among different industrial corporations, among different types of farms, among different types of mining and lumbering concerns whereby one concern, because it was closely connected with a railroad, or had an interest in that railroad, or controlled so much freight that it could dictate terms to the railroad, would be able to squeeze out its competitors by virtue of this advantage. The situation went to such lengths that if a customer was influential enough, it would either threaten to sponsor the construction of another railroad or in some other way desist from giving its business to a certain line unless that line in return would desist from handling the business of its competitors. Thus, the main purpose of the Interstate Commerce Act, as it was written in 1887, was to give shippers equality in their relationship with the railroad industry and to exercise control over rates so that rates would be fair and equitable.

The Interstate Commerce Act was amended several times during the following years. The Elkins Amendment of 1903 dealt largely with discrimination and rebates, but did not materially enlarge the powers of the Commission. The Hepburn Act of 1906 did enlarge the powers of the Commission with respect to rates and accounting practices to the extent that for the first time the Act of 1887 became really effective. The Mann-Elkins Act of 1910 further broadened the powers of the Commission in regard to rates, but the problem of valuation for rate-making purposes arose in connection therewith, the result being the passage of the Valuation Act of 1913.

The Valuation Act was to prove of great importance for a number of years. It called upon the Interstate Commerce Commission to evaluate

each railroad individually as a basis for rate-making, because, despite all the Interstate Commerce Commission had done to exercise control over rates, there were still many complaints that a proper basis for rate-making had not yet been established.

This job of evaluation was tremendous. The wording of the law was rather ambiguous, and it called for the ICC to determine fair value. It was not until nine years later that the Interstate Commerce Commission had its first valuations finally completed, and these were immediately thrown into the courts. They were disputed by the railroads as being unfair on the basis that the Interstate Commerce Commission used the original cost of the investment less depreciation, and the railroads at that time, with the rise in prices that had taken place during the war, insisted that the valuations should be on the basis of the cost of reproduction new less depreciation.

This question was not decided until 1929, when the Supreme Court ruled that the Interstate Commerce Commission did not give proper consideration to the cost increases which had taken place since these railroads were built, and, therefore, refused to accept the Interstate Commerce Commission valuations.

However, it was about that time that these valuations ceased to have much significance because of the advent of competition. It became not so much a question of determining rates on the basis of a fair return on fair value, or on the basis of what the traffic would bear, since the competitive forces that we previously noted began to exercise a very large influence in determining rates.

TRANSPORTATION ACT OF 1920

In the Transportation Act of 1920, Congress, in addition to broadening the powers of the Commission over rates, sought to lay the groundwork for the merging of the railroads into a limited number of systems in order to eliminate what, even at that time, had come to be regarded as wasteful competition. That act called upon the Interstate Commerce Commission to formulate a consolidation plan of its own. That too was delayed a good many years, and it was not until 1929 that the Interstate Commerce Commission came out with its national merger plan for consolidation of the nation's railroads into twenty-one major systems. This legislation also proved to be of little significance because individual financiers having ambitions of their own had already crossed the lines of demarcation marked out in these merger plans and had bought up control of systems that the Interstate Commerce Commission did not provide for in its consolidated scheme. Further, railroad profits were beginning to fall away, and instead of carrying out consolidations the important problem

became one of paying bills and interest charges in order to stay out of bankruptcy.

On the basis of traffic existing at that time, the railroads were greatly overexpanded. For example, there were six lines running between Chicago and St. Louis, and, although these different lines covered different intermediate points and obtained a certain amount of local traffic that could not be interchanged, it was plainly evident that we had a greatly overexpanded railroad plant. It was felt that the only way to improve this situation was to coordinate the operations of the railroads in order to reduce railroad costs and to enable them to operate on a sounder basis.

At that time Joseph Eastman was appointed Transportation Coordinator, and an effort was made, in effect, to try to shrink the industry down to the size of the economy as it then existed. As we shifted over to a war economy, of course, that policy was dropped as it became apparent that we did not have an excess of railroad mileage or equipment, but an actual shortage, and a rather severe shortage in many places.

TRANSPORTATION ACT OF 1940

In the Transportation Act of 1940, the idea of shrinking the size of the industry had been eliminated, and at that time we had a great deal of agitation regarding the inequality of regulation among different forms of transportation. While admittedly by that time coordination was found to be feasible only in a very limited number of instances, still this complaint had become rather chronic during the depression. The gist of the complaint was: (1) the water-ways were developed by the nation, but the water carriers paid no toll for the use of those water-ways or paid a very slight toll; (2) the canals that the states provided were pretty much on a toll-free basis; (3) the highway vehicles, while they paid gasoline tax for the support and construction of state highways, did not really carry their share of the total because the individual automobile owner and the general taxpayer were really carrying the brunt of constructing and maintaining the highways, even though the heavy trucks were doing most of the damage.

Therefore, in the Transportation Act of 1940, the Congress envisaged a uniform transportation authority. It placed highway vehicles directly under the control of the Interstate Commerce Commission instead of having a separate bureau control it as provided in the Trucking Act of 1935. It placed water carriers under the supervision of the Interstate Commerce Commission. Aircraft were not included.

We see, therefore, that the whole evolution of regulation and control always took on some of the economic peculiarities of the time, of the periods in which these amendments were made. In other words, as the transportation system of the nation developed, our acts of regulation

changed, with the emphasis being placed on what was an economic sore spot at a particular time.

In the Transportation Act of 1940 the Congress asked for a general survey of the whole transportation picture. This has not yet been made; yet it is probable that before long, when the reconversion problem has been solved, we will find Congress and the administration paying more attention to the development of a postwar transportation policy, and we will probably see new legislation enacted, or at least some of the aspects of the 1940 act, which had to be laid in abeyance, brought forth.

THE RAILROAD EARNINGS STATEMENT

Most important in the analysis of any railroad security is an analysis of the railroad's earnings statement, because it is upon the present, past, and estimated future earnings that one must depend as a basis for determining the value of that security as an investment. For that reason, we shall devote ourselves to a discussion of the earnings statement, using the Pennsylvania Railroad's income statement for 1945, shown in Table 15, as an example.

TABLE 15
Income Statement, 1945
PENNSYLVANIA RAILROAD COMPANY

Operating revenues:	
Freight	\$603,561,529
Passenger	258,864,371
All other	74,027,511
	<hr/>
Railway operating revenue	\$936,453,411
Operating expenses:	
Maintenance of way and structures	\$134,187,279
Maintenance of equipment	204,532,665
Transportation	396,445,829
Traffic	12,828,187
Miscellaneous operations	16,972,332
General	18,981,139
	<hr/>
Railway operating expenses	\$783,947,431
	<hr/>
Net railway operating revenue	\$152,505,980
Taxes:	
Railway taxes	\$ 27,795,981
Unemployment insurance tax	12,741,141
Railroad retirement tax	13,802,891
	<hr/>
Total taxes	\$ 54,340,013
	<hr/>
Railway operating income	\$ 98,165,967

Hire of equipment	\$ 8,207,049
Joint facility rents	2,778,379
<hr/>	
Net railway operating income	\$ 87,180,539
Other income	42,990,622
<hr/>	
Gross income	\$130,171,161
Miscellaneous deductions	1,489,297
<hr/>	
Balance for fixed charges	\$128,681,864
Rent for leased roads	47,091,023
Interest on funded debt	24,879,628
Other interest	1,114,635
Sinking and reserve funds	6,588,340
<hr/>	
Net income	\$ 49,008,238

GROSS REVENUES

The first figure in any railroad earnings statement is the *gross revenues*, which correspond to the total sales for an industrial company.

The gross revenues of the Pennsylvania Railroad for 1945 were \$936,-453,411. That figure is broken down roughly into three groups: freight, passenger, and miscellaneous. In the annual report seven classifications are given. However, the miscellaneous item should cover the last five adequately, because they seldom amount to more than 10 per cent of the total gross revenues.

Taking the railroad industry as a whole, during the prewar period we find that 80 per cent of the revenues on the average came from freight, about 10 per cent from passengers, and about 10 per cent from miscellaneous sources. These proportions, of course, vary considerably among different systems. We have the extreme case of the Long Island Railroad wherein about 70 per cent of the revenues come from passenger traffic. Among the larger systems we have, for example, the New Haven, where approximately 38 per cent of the gross comes from passenger business.

Generally speaking, we find that the northeastern roads are a little more heavily weighted for passenger business than 10 per cent because they operate in very densely populated territory.

In considering the various proportions into which railroad revenues are divided, we must give due weight to the fact that prior to the war, passenger revenues were extremely vulnerable to competition. The fact is that passenger revenues dropped from \$1,250,000,000 in 1920 to a little over a quarter of a billion dollars at the time of the depression, which represented a drop, roughly, of 75 per cent. The drop in all types of freight revenues during that same period was slightly under 50 per cent. And so, whereas the railroads retained, even in the worst depression year, more than 50 per cent of their freight revenues, they retained only

25 per cent of their passenger business. In analyzing a railroad's potential earnings, therefore, if we are to take the prewar years as a guide, a railroad that depends rather heavily upon passenger business is likely to prove more vulnerable to competition than a railroad that depends primarily on freight.

We have already mentioned that, in addition to the private automobile and the bus, the airplane has become a very great threat to railroad passenger business and one that is still an unknown quantity. We do know that in the five years before the war aircraft travel grew at such a rate that when the war broke out it was equivalent to 15 per cent of pullman traffic. If we wish to project that growth into the future, even the conservative-minded air people would agree that within a relatively short length of time aircraft travel may well be as large as pullman travel, which means that the airplane will have taken 50 per cent of the railroad's first-class business away.

The railroads are, of course, making a very great effort to meet airline competition through the inauguration of through sleeping car service and through the acquisition of modern equipment.

It is fair to state that the industry will probably purchase at least five thousand modern cars at a cost of several billion dollars, a modern car costing between \$70,000 and \$100,000, depending upon the type. Yet, in spite of the fact that there is some justification for feeling that the railroads will be able to keep a portion of the traffic that they obtained as a result of the war through the use of ultramodern equipment and improved service, one must be less optimistic with respect to their ability to maintain fares; and several railroad executives have already admitted that passenger fares will eventually have to be reduced. When this is considered in relation to the huge expenditures for new equipment, even if we are willing to project a volume of passenger business that is 50 or even 100 per cent higher than in the immediate prewar years, there still is not likely to be a very wide margin of profit.

One must also add that the labor factor in passenger business is very high. For each dollar of passenger revenue received, it is necessary to pay out a much larger percentage than for each dollar of freight revenue. Still, it is necessary to maintain the volume of passenger traffic at a level where the road will at least break even on a cost basis, since a considerable portion of the overhead for the entire system is allocated to passenger operations.

FREIGHT REVENUES

With respect to freight traffic, there is a great variance in vulnerability to competition, and this variance was a major factor in determining the

strength of a railroad in terms of its earning power and credit in the prewar years. We mentioned previously that the railroads, prior to the war, had lost approximately 50 per cent of their livestock business to trucks. This involved not only the movement of livestock from various points to marketing centers, but it involved an entire rearrangement of the marketing of cattle.

With respect to agricultural products, the movement of local crops to local areas has been almost completely lost to the railroads. For example, at one time the Central Railroad of New Jersey did a tremendous business in moving vegetables from northern and central New Jersey into the New York market, all of which are now moved by truck. On the other hand, the movement of major crops, particularly wheat, which constitutes a very heavy movement for the railroads—especially for the granger roads, such as the Santa Fe, the Rock Island, and the Missouri Pacific—was held relatively intact because of the very large size of the operations. This involves the harvesting of millions of bushels within limited areas at certain periods of the year, lasting not more than a week or two, and the movement of that wheat, when marketing conditions are propitious, to the major milling centers, such as Chicago, Minneapolis, or Buffalo. The trucks could not compete for this type of business.

The railroads have also retained the transcontinental citrus fruit movement, but have met severe competition from water and highway carriers in the movement of citrus fruit from Florida to the northern market areas.

There has always been a considerable difference in the amount of competition in the movement of heavy goods as compared with light goods. We know that less-than-car-lot traffic, which generally provides the railroads with about 10 per cent of their freight revenues, was particularly susceptible to truck competition because of its light-weight short-haul nature and the relatively high rates charged by the railroads for shipments of this type.

In car-lot traffic there has also been considerable change, and in the prewar years the railroads lost substantial revenues from the hauling of textiles and other light manufactured goods. In the field of consumer durable goods we find a rather mixed situation. However, the greater part of the movement of automobiles has been lost, and while the railroads continue to get a great deal of business from the automobile industry, it is mostly derived from the shipment of raw materials such as steel, which could be moved in very large lots from steel centers in Chicago or Pittsburgh to Detroit, since the steel mills in the Detroit area provide only a very small fraction of the total required by the automobile manufacturers.

With respect to heavy goods like steel and coal, we find that the railroads retained a substantial monopoly as they have in the shipment of iron and iron ore.

In view of the foregoing remarks, it becomes understandable that such roads as the Chesapeake and Ohio and the Norfolk and Western, which are heavily dependent on soft coal, maintained a rather high level of earnings throughout the 1930's. This also explains why a road like the Great Northern, which moved some 50 per cent of the iron ore from the northwestern iron range to the Port of Duluth, remained a relatively prosperous system throughout the depression, even though it had numerous debt problems because of extremely heavy fixed charges.

RAILWAY OPERATING EXPENSES

Again referring to Table 15, the total railway operating expenses were \$783,947,431. Of course, in analyzing the position of any railroad it is very important to know just what its expenses are, why they are what they are at the moment, and what they are likely to be in the future, because upon that will depend the margin of profit.

There are three main items in railroad operating expenses, and these are *transportation costs, maintenance of way and structures, and maintenance of equipment.*

Maintenance of equipment and maintenance of way and structures are often grouped together, so that we might say there are two main items: maintenance of way and equipment, and transportation. Together these constitute about 90 per cent of the total operating expense. Therefore, if we add the maintenance of way and equipment ratio to the transportation ratio, we will approximate the operating ratio, which is the ratio of operating expenses to total revenues.

MAINTENANCE

Maintenance of way and structures and maintenance of equipment were the equivalent of about 30 to 35 per cent of total revenues before the war. The percentage was smaller during the war for two reasons. The first reason is that this ratio will generally tend to diminish with an increase in the volume of traffic, other things being equal. The second reason, of course, is that many materials were scarce, and the roads were unable to maintain as well as they would have liked to, plus the reason that they had to use their equipment so intensively that they were unable to take it out of service for repairs.

Actually, in 1939 the ratio of maintenance to gross was 30.9 per cent. In 1942, which represented the low point for maintenance in relation to gross, this had dropped to 26.9 per cent. After that, the general rise in costs tended to increase this ratio.

We do not have the 1945 ratio because the maintenance figure contains depreciation also, and, as we know, the railroads made very free use of accelerated amortization of emergency facilities in order to establish excess profits tax savings. The result was a sharp decrease in income taxes in 1945 but a sharp increase in the maintenance ratio out of all proportion to reality.

We find that in 1932 the maintenance ratio of 31 per cent was unusually low because the volume of business was so very low. In 1933 it was 29.7 per cent. Obviously, then, those were years of heavy deferred maintenance.

Various formulae have been used to determine what constitutes proper maintenance. Briefly, however, we may say that the whole system of maintenance has undergone a rather revolutionary change and that a railroad in a position to make the necessary capital expenditures could maintain a road better by spending 30 per cent of gross in recent years than they could by spending 33 per cent of gross 10 or 15 years ago.

For example, track walkers have given way to Sperry cars that travel over the railroad, scientifically and automatically detecting flaws in the track. In addition, improvements in materials and processes have resulted in considerable economies. With the exception of the labor factor, and despite the rise that may have taken place in materials because of improved quality and the general rise in materials prices, the maintenance ratio in a well-managed and well-financed road should therefore tend to go down.

However, the cost of railroad labor is a highly important factor, as railroad labor is getting 51 per cent more today than it did a decade ago. The question, of course, as in all industry, is to what extent improved technique has been able to take up this large increase in wages. The answer depends on the nature of the railroad and the nature of the railroad's management.

The level of maintenance will always tie in rather closely with transportation costs. The maintenance costs for the Pennsylvania Railroad in 1945 were \$134,187,279 for maintenance of way and structures and \$204,532,665 for maintenance of equipment.

Both figures will now include a certain amount of depreciation, although before 1943 only equipment was depreciated. The theory was that if way and structures were maintained properly there was no need for depreciation. In other words, no consideration was given to functional obsolescence. If we follow that theory, we must assume that a railroad, once it is built, will always retain its value in the indefinite future as long as it is maintained properly. However, during the 1930's it was found that a large amount of track had to be abandoned and therefore

was no longer profitable. A great deal more probably would have been abandoned if the Interstate Commerce Commission had been willing to permit the roads to do so.

Thus, the maintenance figure includes depreciation, and in this case probably about \$40,000,000 of excessive depreciation, because the 1945 figure, as was mentioned, included the accelerated amortization of emergency facilities.

The transportation ratio is the best index of actual operating costs. However, it is very important to remember that the transportation ratio and the maintenance ratio are interdependent. This is illustrated by the fact that the roads which reduced their maintenance ratio during the depression by allowing their physical property to deteriorate began to experience a constant rise in the transportation ratio. In other words, if the equipment breaks down while in operation, considerable abnormal costs will obviously be incurred. It is possible to cite many concrete examples of instances where improper maintenance tends to increase transportation costs.

TRANSPORTATION COSTS

The transportation costs are the actual costs of moving trains. The transportation ratio will generally run a little higher than the combined maintenance ratio, and will average, roughly, between 35 and 40 per cent. However, the transportation ratio in certain systems has been considerably higher than that average. In cases such as the Rock Island and the Chicago, Indianapolis and Louisville, or Monon Road, which are two outstanding examples of improvement in management that has taken place during the bankruptcy period, and where the ratio was abnormally high, we find a 10 per cent drop in the transportation ratio within two or three years after the new management has taken over. One of the reasons for this is that usually more liberal expenditures are made for maintenance.

In the case of the Pennsylvania Railroad, the transportation costs were \$396,445,829. We note that, despite the fact that the maintenance figure includes some nonrecurring charges, the transportation costs were higher than the combined maintenance total. And if we compare transportation costs with the \$936,453,411 of gross revenues, we shall see that in the case of the Pennsylvania Railroad the transportation ratio of 42 per cent is a rather high figure.

OTHER OPERATING EXPENSES

The other three operating expense items are *traffic*, *miscellaneous operations*, and *general*. The traffic item refers to traffic solicitation. It

refers to the freight offices and passenger agents that a road may have in various cities, even at large distances from the area that is actually served by the railroad, in order to obtain business for that railroad. Traffic solicitation is, of course, extremely important. Most big cities have more than one railroad running between them, and while they may serve different areas in between those cities, a large element of competition for through traffic exists. Naturally, it is the function of the traffic department to obtain as large a portion of that traffic as possible.

Aside from the fact that there is competition among the railroads, there are, of course, competing forms of transportation.

In the case of the Pennsylvania, traffic is \$12,828,187, which is only slightly more than 1 per cent of gross operating revenues. It usually does not run much higher than that.

Then there are miscellaneous operations which amount to \$16,972,332. That is a miscellaneous account which, we may say, includes many minor things, but which we do not have to go into here.

General expenses usually include the head office, all the executive salaries, statistical, financial, and so forth, amounting in this case to \$18,981,139.

The total railway operating expense is \$783,947,431.

OPERATING RATIO

Railway operating expenses divided by gross revenues gives us the operating ratio, which in the case of the Pennsylvania was 83.6 per cent. Of course, that figure includes certain nonrecurring items of accelerated amortization; and if we estimate those nonrecurring items to be in the neighborhood of \$40,000,000, the actual ratio is slightly more than 79 per cent if they are excluded.

The operating ratio of the Pennsylvania in 1944 was only 72.9 per cent. Allowing for the abnormal features, there was, therefore, about a 6 per cent rise in the operating ratio, due in part to increased labor costs, in part to increased materials costs, and in part to the fact that the overtime bill ran unusually large because of the shortage of labor.

But the fact remains that the operating ratio has been creeping up. In 1942 it was at its low because business was good and the first wage increase had gone into effect during that year. The second wage increase came in 1943, and in 1946 there was a third wage increase. The operating ratio in 1942 was 66.1. In 1943 it was 67.7. In other words, the continued rise in traffic between 1942 and 1943 kept the operating ratio fairly stable in spite of some increase in cost. But by 1944 traffic was not going up very sharply any more, and the ratio jumped to 72.9. In 1945 there was an actual decline of about 6 per cent in gross revenues,

and the ratio rose to an actual 79 and a reported 83.6. Undoubtedly, a rise in the transportation ratio was mainly responsible for the continued rise in operating costs and the diminishing of the profit margins.

NET RAILWAY OPERATING REVENUE

When we deduct railway operating expenses from railway operating revenues, the resultant figure is the *net railway operating revenue*. Although this figure is not commonly used, it must be distinguished from *net railway operating income*, which is commonly used and which includes a number of other deductions. The net revenue from railroad operations is merely the difference between gross revenues and railway operating expenses, or \$152,505,980. That is what the railroad has left after deducting the expenses. In other words, it is that 16.4 per cent of the gross revenues which was not consumed by expenses.

TAXES

From net railway operating revenue we take railway tax accruals, which are generally divided into three categories: railway taxes, unemployment insurance taxes, and railroad retirement taxes.

Total taxes paid by the Pennsylvania Railroad in 1945 amounted to \$54,340,013. This was a reduction of \$98,498,000 from the preceding year. In other words, total taxes were only about a third of what they were in 1944. This decrease was made possible by the accelerated amortization of emergency facilities which resulted in substantial tax credits and adjustments applicable to prior years.

Railroad taxes, which consist of federal and various state and local corporate and property taxes, amounted to \$27,795,981, or about 3 per cent of gross revenues. In normal times that percentage runs higher than that because the property and franchise taxes tend to remain more or less constant while the volume of business fluctuates. In New Jersey we have an unusual situation in that the property tax was so very high and the railroads were hit so hard during the depression that the state legislature passed a law making half the tax fixed and half dependent on earnings. This, however, is perhaps the only state in which the property and franchise tax is dependent upon earnings to that extent. Therefore, while this figure was 3 per cent in 1945, before the war, when Pennsylvania's annual gross revenues were around four hundred or four hundred and fifty million dollars, the figure was more nearly 6 per cent of gross revenues.

Unemployment insurance taxes and railroad retirement taxes amounted to \$12,741,141 and \$13,802,891, respectively. These, of course, are payroll taxes, and if the pay rolls go up the tax goes up. Since the pay rolls

went up very considerably during the war, both because the wage rates were higher and because they utilized so much more labor, these figures are considerably higher than they were in the prewar years.

HIRE OF EQUIPMENT AND JOINT FACILITY RENTS

When we deduct taxes from net railway operating revenue we obtain *railway operating income* which, in this case, is \$98,165,967. This figure, however, must be distinguished from *net* railway operating income which is the balance after making an adjustment for *hire of equipment* and *joint facility rents*.

In this case the charges for hire of equipment amounted to \$8,207,049 and for joint facility rents \$2,778,379, a total of \$10,985,428. Therefore, deducting this amount from railway operating income, we have net railway operating income of \$87,180,539.

The hire-of-equipment item, of course, results from the fact that cars are passed from one line to the next in the course of a shipment. For example, if we originate a shipment over the Union Pacific at San Francisco, destined for New York, that car will run on the Union Pacific as far as Ogden, Utah; on the Central Pacific from Ogden to Omaha; on the Chicago and Northwestern from Omaha to Chicago; and, let us say, on the Pennsylvania from Chicago to New York. The car may belong to the Union Pacific, but for every day it travels on another line the other railroad pays a rental of one dollar for its use. The freight rate itself is divided, depending on the length of haul, with a certain charge for termination and origination; but that has nothing to do with the fact that each railroad uses the cars of other railroads on this per diem basis.

Obviously, this item will be the balance between what the road pays for the use of cars from other lines and what it is paid by other lines for the use of its cars, and, therefore, the item might be either a debit or a credit. Ordinarily it is a debit. However, a few roads normally have a credit for hired equipment. This is true of the Northern Pacific, for example, because cars originating on its line go over the Burlington, in which it has a half interest, as well as over other roads; and it, in turn, uses very few of the cars of other systems. This situation arises mainly when a railroad is largely an originating railroad that does not receive a great amount of freight from connections in comparison with the amount it delivers to connections and that does not carry much bridge traffic.

The charge for joint facility rents arises from the fact that railroads frequently share the use of terminals. If a road is the sole owner of a terminal, the expense of operating that terminal will generally be included in operating expenses. For example, the cost of operating the Pennsylvania Station in New York will not be included in joint facility rents,

but will be included in operating expense. Should that terminal be used by another road, the income received would be a credit to joint facility rents. Likewise, should the Pennsylvania use the terminal of another road or, for example, the Union Station in Chicago, the payment it makes for the use of those facilities would be a debit to joint facility rents. The figure we have in the Pennsylvania income statement is the net debit that the Pennsylvania Railroad has to pay out in rentals over what it receives in rentals from other railroads for the use of joint facilities.

We might point out that these items of joint facility rents and hire of equipment, notably hire of equipment, are closely tied in with the maintenance figure. In other words, a railroad that originates little traffic of its own but receives the great majority of its traffic from other railroads will generally have a small amount of equipment in relation to its total freight and passenger movement. The result is that its maintenance-of-equipment charge will be relatively low and its hire-of-equipment charge relatively high, since by the very nature of its business it uses the equipment of other railroads which perform the maintenance.

A good example of such a road is the Nickel Plate. Most of its traffic is picked up from other roads, particularly the coal traffic destined for Chicago, which it picks up from the Chesapeake and Ohio at Fostoria, Ohio. In addition, it has important connections at Buffalo, Toledo, Detroit, and St. Louis, which accounts for the large amount of traffic it receives from other roads. We find, then, that the Nickel Plate's maintenance ratio is quite low, which does not mean, however, that it is under-maintaining the property. On the other hand, its hire of equipment rentals are unusually high in relation to the size of the system, since so much of its traffic is carried in cars it picks up from connections with other railroads. Likewise, its investment in equipment is relatively small.

In the case of the Pennsylvania, by comparing them with the amount of gross revenues, we see that the charges for hire of equipment and joint facility rents are relatively unimportant. But we find some railroads where not only the hire of equipment is large but where, due to the fact that they have had to make extensive use of other roads' terminals, the joint facility rents are very high. This has been one of the difficulties of the Chicago, Indianapolis and Louisville, and was a major reason for the fact that when they went into bankruptcy there had been no income available for fixed charges for some years. The new management, by cancelling these leases, which it was able to do under bankruptcy proceedings, was thus able to make substantial savings in its joint facility rents.

NET RAILWAY OPERATING INCOME

We have, at this point, net railway operating income of \$87,180,539, and, by way of clarification, let us review the steps by which we have arrived at this figure.

We first had gross operating revenues made up of freight, passenger, and miscellaneous, the total being referred to as *railway operating revenues*. As a charge against railway operating revenues we had *railway operating expenses* consisting of transportation, maintenance of equipment, and miscellaneous, the balance left after these expenses consisting of *net railway operating revenues*. From net railway operating revenues we deducted taxes to get *railway operating income*, and from this we deducted the two items of joint facility rents and hire of equipment to get *net railway operating income*. It remains for us now to consider adjustments which must be made in order to determine gross income available for fixed charges.

GROSS INCOME

To net railway operating income is added other income, which in this case amounts to \$42,990,622, giving us *gross income* of \$130,171,161.

The Pennsylvania's other income consists chiefly of dividends and interest on securities owned, the income from this source being relatively larger than it is for most roads. The Pennsylvania, for example, has, among its investments, a substantial equity in the Norfolk and Western Railroad, and receives a very large dividend income from that extremely prosperous railroad. It also has a securities affiliate, the Pennsylvania Company, which owns substantial amounts of securities, and it receives dividend income from that company in varying amounts, dependent on the need of the railroad for income and the availability of funds in the Pennsylvania Company.

Included in other income are income from lease of road and equipment, miscellaneous rental income, income from funded securities, income from unfunded securities, income from sinking and other reserve funds, and miscellaneous and delayed income credits.

The Pennsylvania is not typical so far as its nonoperating income is concerned, as it has followed a rather unusual financial policy in purchasing large amounts of the securities of its leased lines and keeping them alive in its own treasury. A rough estimate would be that some \$30,000,000 of other income is really money it pays back to itself, money which it is obligated to pay, under the terms of leases, on securities which the road has bought up over a period of years. Thus, if we eliminated intercompany items, we would probably find this figure to be more nearly \$13,000,000 instead of \$42,000,000, and correspondingly we would have

to reduce fixed charges by about \$30,000,000. Aside from that fact we do, however, have an indication of the various items that might be included in nonoperating income.

DEDUCTION FROM GROSS INCOME

From gross income of \$130,171,161, which is a combination of net railway operating income and nonoperating income, there are various miscellaneous deductions before fixed charges. These deductions are expenses not in relation to the operation of the railroad but rather in relation to the railroad's other interests and, therefore, could be considered as a charge against nonoperating income. They generally include miscellaneous rents, miscellaneous tax accruals, and a general miscellaneous item under the heading *miscellaneous deductions*. These deductions should be differentiated from the rents or taxes which the railroads pay in relation to their own organizations. We shall find, generally speaking, that these items are relatively small. In this case, the total is \$1,489,297.

After deducting those items we have the amount available for fixed charges, which is \$128,681,864.

FIXED CHARGES

The fixed charges of a railroad generally come under two headings: first, the interest which it pays on its own obligations or those which it has guaranteed and, second, the rentals which it pays for leased lines. In the case of the Pennsylvania Railroad, as indicated before, the latter is a very important item.

Of the \$128,681,864 which is available for charges, \$47,091,023 was paid in rentals for leased roads. As was mentioned, since a large part of the securities of these roads are owned by the Pennsylvania Railroad, a substantial portion of these rentals are received back by the railroad in the form of nonoperating income.

Other railroads which have a substantial amount of leased rentals in addition to the charges on their own fixed obligations include the Reading, for example, and, to a lesser extent, the New York Central. The Delaware, Lackawanna and Western, until it effected a number of recent readjustments in its leases, was a railroad that was made up almost entirely of a combination of lines which the road leased. The only property the D. L. & W. owned itself was its Pennsylvania mileage. The main line of the Delaware, Lackawanna and Western in the eastern section of the system, going from Hoboken to Stroudsburg, is the Morris and Essex, and the line from Binghamton to Buffalo in upper New York State is the New York, Lackawanna and Western. In addition, they

have a number of smaller leased lines, and together they make up the Delaware, Lackawanna and Western system. However, in order to eliminate the double income tax feature the road effected a number of adjustments with its leased-line stockholders, issuing bonds in exchange for the stock of these roads, and has been able to merge the various sections making up this system into one single system.

The reason that the Pennsylvania Railroad has not acted in this direction is that, as we previously mentioned, it owns most of its leased-line securities and therefore loses relatively little by maintaining the status quo.

We then have an item of interest on funded debt amounting to \$24,-879,628. Since practically all of these securities are outstanding, that represents an actual payment in the case of the Pennsylvania.

Then there is interest on unfunded debt, representing short-term loans or, in this case, agreements for the purchase of equipment from manufacturers, with payments to be made over a period of years. These obligations are not held by the public. They may be held by banks, but in this instance, since the Pennsylvania is a road of high credit and it does not have to go to the banks, the assumption is that it represents money borrowed against recent purchases. We will, of course, find that these loans are due to equipment manufacturers such as the Electro-Motive Corporation and others. Interest on unfunded debt in this case is \$1,114,635.

The Pennsylvania Railroad also takes a deduction for sinking and reserve funds out of its gross income, which is not a common practice among railroads. Generally, they show the net income figure first, and then show the amount set aside for sinking funds or reserve funds. Including this item of \$6,588,340, the total deduction from gross income is \$81,162,923, leaving net income of \$49,008,238.

This is what the Pennsylvania Railroad earned for its stockholders in the year 1945. In order to get the earnings per share, of course, we divide that net income by the number of shares outstanding. In the case of the Pennsylvania, there are 13,167,754 shares, and the earnings amounted to \$3.72 per share.

In determining fixed charge coverage, which is a very important figure in determining the quality of a railroad obligation, we divide the gross income by the fixed charges. Using gross income of \$128,871,923 and total charges of \$79,673,625, we have a coverage of approximately 1.6 times. However, if we eliminate the intercompany items which were mentioned and include the securities of leased lines owned by the Pennsylvania Company as well, we may reduce both gross income and fixed charges by roughly \$40,000,000. This will give us gross income of about

\$88,000,000 in round figures and fixed charges of about \$40,000,000, an actual coverage of approximately 2.2 times.

The only complete consolidated balance sheet ever published for the Pennsylvania Railroad was in conjunction with the Wheeler investigation. At that time, they published the consolidated report for 1936, and it showed total fixed charges of \$48,000,000 on a consolidated basis. This contrasted with reported fixed charges of \$80,000,000 for the parent company alone. If the Long Island and the Pennsylvania Company debt were added to this, we would have had fixed charges of about \$85,000,000. So even at that time the fixed charges had been overstated to the amount of about \$37,000,000.

Since that time the road has retired about \$125,000,000 in debt. Therefore, the \$48,000,000 figure shown for the year 1936 is probably close to \$40,000,000 on the basis of the known debt retirements.

THE RAILROAD BALANCE SHEET

The most important items in the railroad balance sheet from the point of view of size are, of course, the items having to do with fixed assets. Of the fixed assets the item of *investment in road and equipment property* is ordinarily the largest.

In the case of the Pennsylvania, investment in road and equipment property amounts to \$1,479,559,481. That is the amount of money the road had originally put into its property, property it owns itself. The Pennsylvania also has an item of improvements on leased property, which represents money it spent in improving railroads which were leased. The latter item is shown in Table 16 at \$148,987,514. This road also shows a small credit item of donations and grants in the amount of \$896,245, making a total investment in transportation property of \$1,627,650,750. Against that figure, the Pennsylvania has accrued depreciation of \$602,290,257. This represents the total of the various depreciation

TABLE 16
Balance Sheet December 31, 1945
PENNSYLVANIA RAILROAD COMPANY

ASSETS	
Investments:	
Investment in road and equipment property	\$1,479,559,481
Improvements on leased property	148,987,514
Donations and grants	Cr. 896,245
Investment in transportation property	1,627,650,750
Accrued depreciation and amortization	602,290,257

Net investment in transportation property		1,025,360,493
Capital and reserve funds		9,978,697
Miscellaneous physical property		3,128,397
Sinking funds		1,352,463
Investments in affiliated companies		655,345,782
Other investments		54,364,520
P. C. C. & St. L. sinking fund reserve		3,927,756
Current assets:		
Cash	69,300,338	
Temp. cash inv.	125,062,228	
Accts. rec.	33,053,475	
Mat. and supplies	45,479,331	
Other	31,011,973	
Total current assets		303,907,345
Deferred assets:		
Managers of trust		124,082,581
Insurance fund		26,551,252
Other deferred assets		14,781,960
Total assets		\$2,223,731,246
LIABILITIES		
Capital stock (\$50 par)		\$ 658,387,700
Premium on capital stock		10,148,229
Long-term debt:		
P. R. R. funded debt	530,945,250	
Assumed debt	11,397,000	
Guaranteed stock cert.	6,260,000	
Equipment trust obligations	90,239,000	
Mortgages, etc.	174,767	
Total long-term debt		639,016,017
Current liabilities		147,667,425
Deferred liabilities		1,097,731
Leased and affiliated companies—construction		958,989
Accrued depreciation—leased properties		98,942,579
Unadjusted credits		30,677,632
Surplus:		
Additions to property and funded debt		
Retired through income and surplus		255,962,529
Sinking and miscellaneous fund reserves		143,272,205
Profit and loss		237,600,210
Total liabilities		\$2,223,731,246

charges made throughout a period of years on property that is still intact.

If we have a locomotive, for instance, that is being depreciated over a period of 35 years, but which is actually cast aside within 23 years, we shall have to make a special deduction out of surplus to cover the last 12 years. If that locomotive is completely out of service, the deduction will be taken out of both the investment account and the depreciation account. That is why the depreciation of approximately \$602,000,000 does not

represent all of the depreciation taken over the one-hundred-year history of the road but rather the accrued depreciation on property that is not yet completely written off.

Although it is customary, when a piece of property is completely written off, to take it out of both the investment and the depreciation accounts, we find that this is seldom the case. If it is the case, that piece of property is not worth very much because, unlike the General Electric Company that actually writes off property rapidly and long before its usage has been exhausted, the railroads often lean in the other direction. The property usually becomes worthless before it is completely written off, although that may be somewhat untrue in the case of the Pennsylvania which has a more conservative accounting practice than the industry as a whole.

The investment in transportation property less recorded depreciation and amortization, then, is \$1,025,360,493. There are a number of small items among the assets that we need not consider because they are peculiar to the Pennsylvania Railroad and indicate special situations related to its various leases.

The next important item is investments in affiliated companies. This item is very important for the Pennsylvania Railroad for the reason already mentioned, that the railroad is made up to a rather considerable extent of leased lines. The amount shown here is \$655,345,782. We find, therefore, that the road has a total property value of about \$1,700,000,000, making it the largest transportation system in the country.

These investments in affiliated companies are made up, roughly, of \$429,000,000 in stocks, \$27,000,000 in bonds, \$38,000,000 in unsecured notes, and \$160,000,000 in investment advances. We will notice that the amount of stocks owned is very large and represents the huge investments in the equities of their own leased lines, about which we have already spoken.

The road also has other investments consisting of investments in non-affiliated companies in the amount of \$54,364,520. This may include properties that it requires in connection with its transportation business which it does not operate itself but which operate as separate entities. It may include 100 per cent controlled subsidiaries or subsidiaries in which it has substantial control or minority ownership.

CURRENT ASSETS

We next have current assets which, because of the size of the system and the prosperity the carrier enjoyed during the war period, is a rather large figure amounting to \$303,907,345. The railroad's current assets usually consist of cash, including special deposits which are earmarked

for the payment of taxes or interest that may be due or accrued, but which is not yet payable. It includes accounts receivable and materials and supplies which have been purchased.

During the war period this figure rose rather sharply because the government did not pay as promptly as the private shipper. The accounts receivable item therefore was generally swollen to a greater extent than the increase in business would appear to justify.

Of course, every railroad has on hand a large supply of the materials it requires, whether it be coal, fuel oil, steel track, ties, or any one of the numerous items required for the repair of equipment. In the case of the Pennsylvania, these materials and supplies amounted to \$45,000,000.

The larger items among current assets included accounts receivable of \$33,000,000; actual cash of \$69,000,000; and temporary cash investments, including funds set aside for taxes and contingencies, of \$125,000,000.

DEFERRED ASSETS

We then have a number of deferred assets. In the case of the Pennsylvania we have a very interesting situation because the largest item in deferred assets was the trust created on October 9, 1878, whereby the Pennsylvania inaugurated a policy which other railroads could have followed with a great deal of profit. In establishing this trust the Pennsylvania set aside \$10,000,000 for the purchase of their own securities. It then took the interest and the dividends received from those securities and reinvested it. Thus, in the period of sixty-eight years during which this fund has been in existence the \$10,000,000 has grown to \$124,000,000 through the compounding process, and consists of securities of the system in addition to the investments which the railroad owns directly in its affiliated companies.

The railroad also has an insurance fund of its own which is unusually large, amounting to \$26,000,000, and which is carried as a deferred asset.

Total assets are shown as \$2,223,731,246, or not much less than 10 per cent of the total assets of the railroad industry as a whole.

LIABILITIES

On the liability side we have, of course, the capital stock and the premium on capital stock. Premium on capital stock will arise only where the stock is sold above its par value, which in the case of the Pennsylvania is \$50 per share. The capital stock is stated at \$658,387,700. The premium, which is what it received over and above par value in the sale of this stock, is \$10,148,229. The total is the capital investment taken at its par value plus any premium received. In order to get

the break-up value of that stock, it would be necessary to add the various surplus accounts.

We then have the company's funded debt in the amount of \$530,945,-250. If we compare that long-term debt to the fixed charges of the railroad we shall find that the two are apparently out of reasonable proportion. The reason for that is, of course, that a good part of the fixed charges do not represent payments on its own debt but rather on leased-line debt and on leased-line stocks. \$530,000,000 at roughly 4 per cent would give us fixed charges of only \$21,200,000. Actually, the net fixed charges, as indicated, are in the neighborhood of \$40,000,000, the difference being made up by the amount of leased-line securities outstanding in the hands of the public.

Equipment trust obligations consisting of \$90,239,000 is the other important item. That is debt outstanding against equipment. We find that railroads, especially the strongest railroads, have elected to finance any new equipment purchases and use their funds for the retirement of long-term debt. Since these equipment trust obligations are one to ten year serial obligations, they are in very great demand by banks, and can be sold at a yield of $1\frac{1}{4}$ or $1\frac{1}{2}$ per cent. If they take that money and go into the market, or through call retire their outstanding mortgage debt, it is possible for them to effect savings of between $2\frac{1}{2}$ and 3 per cent.

There are a number of miscellaneous items in the debt which we shall not itemize. However, the total debt is \$639,016,017. That is the amount of debt which the system owes directly. We may note that it is substantially equal to the capital stock. As indicated before, it is not the complete picture because of the guarantees or contingent liability undertaken through the leasing of other properties.

Current liabilities, which include traffic balances, wages, taxes, interest, and other accounts payable, are \$147,667,425.

If we deduct the current liabilities from the current assets, we get net working capital, which in this case is \$156,239,920. Under normal conditions, the Pennsylvania usually ranks as the railroad with the largest amount of net working capital.

We also have a series of unadjusted credits, which includes, as the last item, accrued depreciation on leased property of \$98,942,579. If we add the item of investment in transportation property, other than the road's own lines, amounting to \$655,000,000 plus the improvements on that of \$148,000,000, we would have a total of \$803,000,000. Against that we may take this item of accrued depreciation on leased property, which would give us a net property investment account in affiliated but not directly owned properties of approximately \$700,000,000.

The surplus account in the case of the Pennsylvania is interesting because it is quite large, amounting to \$636,834,944. This includes miscellaneous reserve funds of \$143,272,205, additions to property through income and surplus of \$255,962,529, and profit and loss of \$237,600,210.

If we include all the surplus accounts, we will get a book value of approximately \$91.50 per share for the common stock. However, it is interesting to note that this is really of minor significance in appraising the value of a security. Too many people during the 1920's and the 1930's went wrong by trying to appraise a stock on the basis of its book value. An extreme example is that of Missouri Pacific, which had a book value of about \$188 per share. In spite of its book value, this stock went down to about five or ten cents a share. Since proposals have been made to revise the bankruptcy laws it has now risen to three or four dollars. We are referring, of course, to the old common stock that went into bankruptcy.

Like any other industry that is not a monopoly, asset value ceases to have much significance, at least if the assets are not in the form of cash and other current assets. It is a moot question as to how much attention should be paid to current assets as a means of realizing value, since, particularly in the case of railroads, properties are never liquidated. If they ever get down to the point where they cannot operate because they cannot meet their bills, the property usually is worth very little, certainly not more than is sufficient to realize a small percentage of the par value of the mortgage bonds. The most important accounts in the balance sheet, then, are the current assets and the current liability accounts as an index of the financial strength of a property.

Also, if we take comparative balance sheets over a period of years we can compare the amount of debt outstanding. In the case of the Pennsylvania, of course, we would have to include the debt of the leased-line obligations as well. That is a figure that is generally very hard to get, although the direct debt is listed every year. However, the Pennsylvania Railroad has recently made a practice of indicating just how much of a net reduction in outstanding obligations, both its own and leased-line obligations, has been effected during a particular year.

Generally speaking, the railroads have been doing a much better job on their annual reports. That trend is true of industry as a whole, but it is particularly true of the railroad industry which, because of the relatively poor public relations job it did during the depression, has been particularly conscious of the attitude of the public and of its own employees toward the system.

Recently the railroads have sent out public-relations people to query

their own employees to see what impression they have regarding the nature of the property. Some of the answers are rather enlightening. The average employee, for instance, felt that the railroads were earning more than 10 per cent on their property investment or that the railroads could absorb a very large wage increase and still earn a great deal of money. On the whole, the results tended to give one the impression that the railroads had not done a very good public-relations job in the past, even with their own employees, let alone the public as a whole, and their actions in recent years have indicated that they have become alive to that situation.

They are sending out questionnaires to the people who ride the lines, asking for suggestions; and they are asking their employees for suggestions. They are trying to correct misunderstandings with respect to the nature of railroad operations by means of posters and other types of advertising. Of course, all of this is beneficial to the industry.

DEPRECIATION POLICY OF THE RAILROADS

Depreciation is an important factor in both the earning statement and the balance sheet of the railroad industry. As we indicated, we find that the accrued depreciation account is really an offset, or credit, against the total property investment.

Railroad depreciation policy has left much to be desired. Even today the depreciation policy in industry generally, and even among public utilities, is considerably sounder than that found in the railroad industry. This is because the railroads have pursued the policy for a number of years of assuming that if property is kept in good shape there is no need for depreciation.

In 1906 the Hepburn Act was passed. It provided for depreciation of railroad property and for the Interstate Commerce Commission to establish the rules governing such depreciation. It was not until 1914, however, that the Interstate Commerce Commission, after overcoming the objections of the railroads, issued a ruling that railroads had to depreciate their equipment. However, the rates of depreciation were left to the railroad industry and were not determined by the ICC.

This was not very satisfactory. The poorer railroads, and particularly those that were interested in showing the largest possible earnings, decided that they would take extremely low depreciation rates. The result was, in some cases, that equipment which was greatly over-age was depreciated to the extent of 35 per cent, for example, and still carried on the books of the railroad at 65 per cent of its original value. Of course, that was not generally true throughout the industry, but many railroads followed such a policy.

While the Commission insisted that depreciation be charged in 1914, it was not until 1935 that the Commission ruled that specific rates had to be applied to certain railroad equipment. The Commission took cognizance of the fact that many railroads were carrying old equipment on the books at an unreasonably large percentage of the total original cost, and the rates for such railroads were made quite high. However, the more conservative railroads that had been depreciating their equipment properly were able to use a lower rate.

The Commission's theory was that, on the average, a steam locomotive would last approximately 35 years and should be depreciated at approximately 3 per cent a year. On the other hand, passenger equipment might last about 25 years and should be depreciated at the rate of about 4 per cent a year. It was estimated that freight equipment would last about 22 years and should be depreciated at the rate of about 4.5 per cent a year. As already indicated, the rate applied was much higher in the case of certain systems in order to compensate for the inadequate depreciation policy that those systems had been following.

Depreciation of roadway and structures was left to the discretion of the railroad; but, several years later, the Commission ruled that railroads would have to take depreciation of structures and roadway, and the amount set was 1 per cent of the value at which these investments were being carried on the books. This was not a high rate. However, the railroads objected to it because their credit was already severely impaired due to severe decreases in earnings, and they asked for several extensions.

The original rule was promulgated in the 1930's during the depression. It was not until the position of the railroad industry had greatly improved that the industry, rather than oppose the imposition of depreciation on roadway and structures, approved such depreciation since it would result in substantial tax savings. The government, however, refused to allow depreciation on roadway and structures unless it was made a uniform practice by the ICC. On January 1, 1943, this was done, and depreciation on roadway and structures was placed in effect on the basis of 1 per cent of the book value.

This, of course, had some effect on the level of earnings, and will have a considerable effect on the level of earnings during poor years.

As we know, the railroad industry has a very heavy property investment on its books, the reason for this being the rather inadequate depreciation policy it has followed over a long period of years. For example, a road of moderate size, such as the New Haven, might have a valuation of \$500,000,000, and if we were to charge 1 per cent of the fixed portion of that property consisting of roadway and structures, the charge might involve two or three million dollars, the balance of the

depreciable assets having been depreciated already. During the war years, this meant an actual saving; and, as a result, the Commission was able to enforce its rule without any hardship to the industry. However, in the future this additional depreciation charge must be taken into consideration.

ANALYZING A RAILROAD'S PHYSICAL CONDITION

In analyzing a railroad's physical condition, there is little that will substitute for an actual engineering knowledge of railroading, and a trip over the railroad property in order to learn the condition of the equipment, the roadway, and the structures. It is necessary to determine at first hand how modern its shops, its traffic control, and its equipment are, and how strong is its roadbed. But, of course, such determinations are commonly made by those who devote the major part of their efforts to railroad analysis.

Certain helpful figures are available, however. It is possible to determine the average age of the equipment of a railroad from the material in Moody's Railroads. The Association of American Railroads will issue releases showing the number of freight cars and of locomotives in need of repair. These figures have not been very important during the war years because the assumption was that needed repairs were made as soon as possible, despite the shortage of labor and materials, because every piece of equipment was needed in order to carry the unusually heavy volume of freight created by the war. However, in the prewar years these figures were of some importance, and, undoubtedly, they will be of importance in the future as well.

The structural requirements of a railroad will vary considerably, depending on the location, the traffic density, and the type of traffic it carries. We have already mentioned that in the southwest and the southeast, where the terrain is generally flat and the climate is mild, the type of roadbed and structures required is less elaborate than is required in the north.

In building the transcontinental railroads, a great deal of money was spent in tunneling in an attempt to keep the grades within reasonable limits, which for railroads is about 1 per cent and certainly not over 2 per cent. In the case of the Canadian Pacific, there was one point in the Canadian Rockies at which there was a 4.4 per cent grade, and it was necessary to use four locomotives to carry a twelve-car passenger train over the Great Divide. At considerable cost this road built a series of spiral tunnels, which proved to be a sound expenditure because of the tremendous decrease in expenses which resulted, since they now use only one helper locomotive. The Great Northern, the Denver and Rio Grande,

and others have spent very large sums of money in tunneling through the mountains in order to keep their grades at a minimum. Of course, it is necessary to have some knowledge, some understanding of the needs of the different railroads in order to determine whether they are operating efficiently.

In a number of cases railroads were able to improve their credit very materially by making improvements both in roadway and in equipment. Two outstanding examples which analysts cite are the Chicago, Indianapolis and Louisville, which has been not so much a matter of improving the physical property as of eliminating unneeded obligations in the hire of terminals and equipment, and the Chicago Rock Island Pacific, which carried out a five-year plan that resulted in a very sharp decrease in operating expenses.

REVIEW QUESTIONS

1. What factors contributed to the declining revenues of railroads from 1920 to 1940?
2. What factors contributed to the World War II boom period?
3. To what uses have those wartime earnings of railroads been put?
4. To what extent are competitive modes of transportation likely to make inroads on railway revenues during the next few years?
5. What were the main purposes of the Interstate Commerce Act of 1887?
6. Trace the development of government regulation of railroads.
7. What proportion of railway revenues generally comes from freight; from passenger travel?
8. In general which has the greater element of stability: passenger business or freight business?
9. What efforts are railroads making to maintain their passenger business?
10. Give examples of economic factors over which the railroads have no control which materially affect freight revenues.
11. What are the main classifications of railroad operating expenses?
12. What per cent of revenues was expended for maintenance of way and structure and for maintenance of equipment prior to the war?
13. What factors influence the maintenance policy of railroads?
14. Define traffic density.
15. What effect has traffic density on maintenance? What other factors determine the amount of maintenance required?
16. How can one determine whether a railroad is providing an adequate amount of maintenance?
17. Why did the ratio of maintenance to gross revenues tend to decline during the war?
18. Account for the unusually high maintenance ratios in 1945.
19. What maintenance ratio is generally considered to reflect adequate maintenance?
20. What has been the trend of maintenance costs over the past fifteen years?
21. What ratio is considered to be the best index of actual operating costs?
22. What constitute transportation costs?

23. Approximately what is the average normal ratio of transportation costs to revenue, commonly referred to as the transportation ratio?
24. Why is it necessary to consider the transportation ratio in conjunction with the maintenance ratio?
25. What expense items are usually included as transportation expense; as general expense?
26. What has been the trend of operating ratios during the past five years?
27. What types of taxes are paid by the railroads?
28. Under what circumstances do the following expenses accrue: joint facility rents; hire of equipment? What is the relationship of these expense items to maintenance expense?
29. What sources of income are included in the classification "Other Income" on the profit and loss statement of a railroad?
30. What are fixed charges?
31. How is "fixed charge coverage," or "times fixed charges earned," computed?
32. By what per cent have labor costs increased over the past six years?
33. What per cent of revenues are generally expended for labor; for materials?
34. Give examples of what may be included under the classification "Deferred Assets" on the balance sheet of a railroad.
35. Account for the fact that the fixed charges will usually be substantially higher than the interest total on the funded debt.
36. What financial benefits accrue to a railroad by the issuance of equipment trust certificates?
37. Of what significance is the book value of common stock of a railroad?
38. Why are the current assets and current liabilities one of the most important indexes of the financial strength of a railroad?
39. What depreciation policy have railroads followed historically?
40. What sources of information are available which would indicate the physical condition of the property of a railroad?

RAILROAD SECURITIES (*Continued*)

by Dr. Mason Bogen, *Investment Counsellor,*
Hentz & Co.

BEFORE we take up the actual analysis of different types of railroad securities, including equities and bonds, it will perhaps be helpful if we discuss the various services and other means of obtaining railroad information rapidly at minimum cost.

Probably no other industry, even including the public utility industry, issues as many detailed figures as does the railroad industry. These figures are contained in the annual reports of the different railroads, but even in greater detail in the various reports, both monthly and annual, which the railroads must file with the Interstate Commerce Commission. In fact, the various industrial executives, who now complain so bitterly because they have to spend so much time in filing the various governmental questionnaires, probably do not have any more trouble in this respect than the railroads have long been having by virtue of ICC procedure in setting up uniform accounts.

SOURCES OF INFORMATION

The Interstate Commerce Commission and the Association of American Railroads, which is supported by the railroad industry as a whole, offer the most effective means of obtaining interim information. Much of this information, of course, will be found in the annual report of the railroad, which is generally issued from two to four months after the close of the year but which, of course, does not provide the information as fast as one would like to get it.

AAR REPORTS

The Association of American Railroads issues a weekly carloading report, which will be sent free upon request. It contains the total weekly carloadings of each railroad broken down into groups. There are eight classifications: grain, livestock, coal, coke, forest products, ore, miscellaneous merchandise in less than carload lots, and miscellaneous mer-

chandise in carload lots. These represent loadings that originate on the lines of the various railroads. To them must be added the cars that are received from connections, which are not broken down in this weekly sheet, if one is interested in total traffic. However, the receipts from connections are not included in the carloading figures, since they are really a duplication of freight that has originated at some point or other on another line.

SIGNIFICANCE OF CARLOADINGS

During the war period, the weekly carloading figures did not have quite the significance they had in the prewar years. The reason for this was that railroads generally operated pretty much at capacity, and thus other factors became more significant while the carloading factor became less significant. Those other factors were the vulnerability to taxation and the amount of operating expenses they had, since expenses often rose disproportionately with the amount of traffic.

However, from this point onward, carloading figures will bear close watching. Those who followed them from week to week would have noticed, for instance, that roads in the northeast were affected by strikes more severely than were roads in the middle west and far west; also that the heavy grain movement, both to marketing centers in this country and for export abroad, served as a sustaining influence for the mid-western carriers. The mid-western roads, therefore, on the whole, did better than the northeastern roads, and that, of course, would be indicated in these figures, which are available within ten days after the actual loading period.

During the 1930's, these reports served a very useful purpose, for competition was so keen at the time that one could keep a ready running record of the vulnerability of different systems to competition for different forms of freight by listing the carloadings week by week and over a period of years. For instance, the railroads lost a considerable portion of their less-than-car lot traffic to trucks; and this, of course, was reflected in the carloading figures.

In the case of ore and coal, where we do not have much in the way of competition, we will find a much closer correlation of carloading to the general level of industrial activity, and notably the steel industry, than we find between the general level of industrial activity and less-than-car-lot traffic. This is true because, as indicated, competition became a stronger and stronger factor in less-than-car-lot traffic.

Another factor in the long-term decline in less-than-car-lot traffic was the expansion of freight forwarding, an industry which was engaged in consolidating shipments from a number of shippers, sending out these

consolidated shipments at the car-lot rate and then distributing them at the destination. Also, as we know, in department store buying there has always been a movement toward consolidating purchases. The Chase method of automobile assembly involved a large number of car-lot shipments of parts, instead of a much larger number of individual shipments of passenger cars. Thus, on the whole, there was a tendency for less-than-car-lot traffic to decline while the car-lot traffic increased.

The railroads on the whole were not terribly sorry to see this trend, where it did not mean any loss of traffic to themselves. In other words, they even encouraged the expansion of this forwarding business, and often bought substantial interests in freight forwarders themselves because, despite the higher rate that less-than-car-lot traffic carried, the increased cost of handling it was so very great that they often lost money on that traffic while showing a considerable margin of profit on car-lot traffic. The Universal Carloading Corporation, for instance, was a subsidiary of the Van Sweringen Lines, and the Merchants Despatch is a subsidiary of the New York Central.

SHIPPERS' ADVISORY BOARDS

Another service of considerable value is that which has been released in recent years by the various shippers' advisory boards. These are organizations of shippers located in various sections of the country—there are thirteen in all—including such areas as New England, Atlantic States, Great Lakes, Northwest, and others, which meet every quarter and estimate their probable loading requirements for the next three months. Of course, these estimates may often be inaccurate as a result of marked changes in business activity. Nevertheless, by breaking up the estimates into various items, such as grain, flour, cotton, lumber, and the like, we are able to get some indication, for a railroad specializing in one of these commodities, as to what the outlook is, at least in the expectation of the shippers who are responsible for the bulk of traffic moving over the line. This information is also sent out by the Association of American Railroads and is called *The Estimates of Thirteen Shippers' Advisory Boards*. It is worth getting when one wants to make a collection of different items of value in forecasting the level of railroad earnings.

ICC REPORTS

The Interstate Commerce Commission, during the past years, has issued monthly forecasts of anticipated earnings, which include reports on other financial items, such as the operating ratio for truck operators or, for example, the amount to which railroad earnings in 1945 were depressed by accelerated amortization charges. These monthly forecasts

could prove to be very valuable. Of course, many of these items may have no direct bearing on the value of securities or the future of earnings, and may be chiefly of academic interest; but occasionally there are some very interesting summaries. Upon request, the Interstate Commerce Commission will send a list of their publications, either mailing them free or at nominal charge, and a selection may be made therefrom.

In trying to forecast the possible level of carloadings, of revenues, and of earnings for a system, it is necessary to form an idea of the type of traffic which an individual system carries. This is necessary in order to determine whether that system depends upon growing industries that are likely to give an increased volume of traffic, or whether it depends upon a backward industry such as anthracite, for example. As we know, after the war the demand for anthracite tapered off as fuel oil tended to take away the domestic heating market, just as it did in the years preceding the war. We are also interested in determining whether the road is dependent upon a commodity for which there is likely to be competition from other forms of transportation. Of course, this requires considerable experience as well as considerable judgment. But with the freight commodity statistics issued by the Interstate Commerce Commission, the various statistics on freight traffic, which are contained in the annual reports of the individual railroads, and the various Association of American Railroads publications, we are able to form fairly accurate ideas of just what makes a particular railroad profitable or unprofitable.

One's judgment, of course, could very easily be wrong. For example, in the early 1920's the Chesapeake and Ohio was not considered to be as good a credit as many other railroads because it specialized in one form of freight, soft coal, whereas the roads which had a miscellaneous freight movement were considered more desirable. The reasoning was that if anything happened to soft coal the Chesapeake and Ohio would be very hard hit, while the other roads would likely be able to absorb a sharp decline in the movement of any single commodity. This proved to be poor judgment, as we know, because some classes of freight became vulnerable to competition, while soft coal, particularly the soft coal from the bituminous fields of western Pennsylvania, was not only not susceptible to competition to any important degree but, because of the superior quality of the coal, the market for that particular product tended to expand in relation to that for soft coal mined in other areas.

EARNINGS REPORTS

Those who find it desirable to have the earnings reports as soon as they come out can do so by following the newspapers. There is a monthly earning service called *Broker's Earnings Indicator* which

furnishes, the morning after publication, the gross revenues, the operating expenses, and the net operating income of individual systems in a small loose-leaf binder.

Another valuable publication is the *Monthly Earnings Record*, published monthly by William Dana. It usually comes out about a month after all the earnings are actually released, but it gives a breakdown of earnings, including depreciation charges, fixed charges, and federal income taxes that is not easily obtainable elsewhere. The cost of that service is \$20 per year.

COPELAND TRAFFIC DENSITY SERVICE

For use in the appraisal of individual securities, we have a service called the *Copeland Traffic Density Service*, which consists of various traffic maps showing the actual movement of freight on individual railroads for specific years. This service does not cover every railroad every year, but generally the Copeland people will take the density of about 20 per cent of the roads each year, and if there is a road that is very important and is involved in certain changes, they might actually take the density of that road every year for a short period. They obtain these density figures by means of the waybills which cover every movement of freight over each railroad.

We shall not describe the Copeland maps in detail, but it is suggested that the student become familiar with them in a general way if they are available. Their main feature, however, is that they show the traffic density for the whole system and also for each section of the system as well as the direction in which that traffic flows. This information is important both for the over-all picture it gives and for the detail it yields in regard to the various sections, since the density varies over the system. For example, in the New York, New Haven and Hartford system we might have 1,000,000 ton-miles of freight between New York and New Haven and at the same time have 2,000,000 ton-miles between New Haven and New London.

This information, of course, is of considerable value when we have various mortgage liens on different sections of the property and wish to know to what extent these liens are protected by the earnings obtained from the traffic moving over them.

These figures are often adjusted for future years by taking the trend of the system as a whole; but the adjusted figures do not actually represent the loadings on the individual sections for the years since the most recent study was made. If the system's traffic goes up 20 per cent, 20 per cent is added to the entire system. Until the service calculates the actual freight on each section by going back to the road and taking another

density schedule, they are unable to give the changes other than on a system-wide basis, the system figures being available through the ICC reports. In any event, it is possible to determine from the maps the ton-miles per dollar of debt by dividing the density of any particular section by the dollar amount of the bonds outstanding and secured by a lien on that section.

The rule of thumb that was applied prior to the war was that a section of road that had somewhere between 25 and 30 ton-miles per dollar of debt would be self-supporting. If it had considerably above 30 ton-miles it was considered to have a very good margin of earnings. It is probable that this figure should be increased somewhat because of higher expenses which will make it impossible for the railroads to go back to the light density they had during the depression and make even the showing they did during the depression years.

These figures are of value primarily for the individual liens of a system covering certain sections of the property. The other important determinant of the protection which one has in any particular mortgage lien is the general credit of the property.

In recent years the credit of a property has been taken more seriously than it was before World War I, when any bankruptcy generally was followed by protection through continued interest payments for the well-protected senior liens. Then, if you had a sound first mortgage and the property went into receivership, you had little worry about the continuity of interest. However, because of the very sharp decline in railroad earnings, and as a result of competition during the 1930's and legal difficulties in connection with Section 77 of the bankruptcy laws, many roads arbitrarily stopped interest on every obligation, and even the best-secured issues declined sharply in price. As a consequence, greater stress was laid at that time upon the general credit of the property and its ability to stay out of bankruptcy, even if it ran into a lean period.

However, in conjunction with other factors, the *Copeland Traffic Density Service* is still important, interesting, and useful when one is trying to appraise the position of a railroad bond as well as the position of a railroad as a whole, because the heavy density line will not be nearly as vulnerable to high costs as a line of light density.

There is a definite correlation between the traffic density of a railroad and its profitability, although it does not necessarily follow that a line of fairly heavy density will always be profitable and a line of moderate density will always operate at a loss. There are other factors involved.

One factor is the nature of the territory in which the road operates. In the southeast and southwest a much lighter density is required in

order to make the line self-supporting, because the rates are generally higher.

The other factor is the cost of maintenance, particularly of roadway and also, to some extent, of equipment, because the equipment is not subject to the effect of weather conditions in the same degree as it is in the northern part of the country. Roadbed, in particular, is rather easily maintained in the southeast and southwest, where the climates are mild.

We shall find, therefore, when we look at the Southern Railway on the density map, that its traffic density is low in comparison to some of the northern roads which, however, might be less profitable than the Southern Railway, because it benefits from a combination of lower maintenance costs and higher rates.

In the past the southern roads had the added advantage of a lower wage scale. However, that is being gradually eliminated as a result of the pressure of the unions to make the operating wage rates uniform and the minimum wage laws which have brought the very low minimums of the south more or less into line with those of the north, although some differential still exists.

MORTGAGE MAPS

Another valuable service is found in the White and Kemble mortgage maps, from which, because of their coloring and the fact that each mortgage is generally shown by a different, outstanding line about a quarter of an inch wide, it is possible to tell immediately what portion of the road's property is covered by a particular mortgage lien. It is also possible to determine by inspection the priority and the number of different liens on any section of the road.

OTHER SERVICES

Standard and Poor's puts out a monthly railroad service that is rather complete, and, at least in certain sections, contains information to which the railroad analyst would want to refer quite often. This service gives the monthly earnings statement and the cumulative earnings, showing the first two months' or first three months' earnings and also the earnings for the twelve months through the last month reported. It also includes the balance sheet for the last month that is available and a running record of gross revenues, net railway operating income available for charges, carloadings, various operating ratios, and so forth. They also have a weekly bulletin which contains suggestions on various bonds, which is more analytical than statistical.

Of course, we are all familiar with Moody's annual railroad manual. This excellent manual is generally accurate and contains short descrip-

tions of all railroad bonds and stocks. It includes a running record of earnings for the past six years, together with the balance sheet for those years. In addition it includes other appropriate descriptive and statistical material for each road and for the industry as a whole.

It might be well to mention, however, that in making up a more or less elaborate report, it is always better to go directly to the annual reports if they are available. If one is continually engaged in this work, these reports should be kept for at least five or ten years back. Their use will eliminate errors and will also provide more detailed information than is available elsewhere. Particularly is this true of the annual reports of recent years, for railroad managements, especially the financial managements, have become rather conscious of the fact that numerous railroad analysts are turning out reports for public consumption. As a result, the railroads now make an effort to highlight the important factors of the year's operations in their annual reports.

The Pennsylvania Railroad annual report, for example, will explain all the refinancing that was done in any particular year. This information is, of course, important because one of the big factors in improving the position of railroad equities in recent years has been the substantial reductions in fixed charges which have taken place, a matter which we will discuss at greater length when we take up the analysis of railroad equities.

FACTORS AFFECTING THE CREDIT POSITION OF RAILROADS

In analyzing a railroad obligation it is necessary to approach the problem from two angles, (1) the credit of the system as a whole, and (2) the quality of the individual lien.

We shall take up first how to obtain an analysis of the credit position of the railroad as a whole, which is not vastly different from the methods applied to public utilities or industrial companies, with the exception of the fact that railroads have a proportionately larger amount of debt outstanding.

FIXED CHARGE COVERAGE

The old standard for determining whether or not a railroad obligation was a good obligation was that if fixed charges were earned one and one-half times over a period of years the obligation was sound.

The basis for this statement can be found in the legal requirements for the investments of savings banks and insurance companies in the state of New York which were in effect prior to the depression. This requirement was that a railroad earn its fixed charges $1\frac{1}{2}$ times in six out of the seven years preceding the year in which the obligation was purchased, including the year preceding the purchase. In other words, if a railroad bond was

bought in 1925, it should have earned its fixed charges $1\frac{1}{2}$ times in six of the seven years from 1918 through 1924, including 1924.

This standard was established at a time when railroad earnings were relatively stable, when the railroad which was earning its fixed charges 1.5 times in one year might conceivably go down to 1.3 times in another year, and might have an increase to 1.8 times in a good year.

However, during the depression years and the war years which followed the depression years, this range was broadened and a considerable fluctuation in railroad earnings occurred. It became not uncommon, even for a road of relatively good credit, to earn its charges once or perhaps .8 times in a poor, depression year, and then to earn them 5 times in the early war years before the excess profits taxes had their effect. So that the straight-line use of fixed charge coverage, which merely involves determining from a manual the average fixed charge coverage for a period of years, no longer provides the necessary information and no longer has the value that it had before the depression and before fluctuations in earnings became typical of the railroad industry.

Another factor, of course, that must be considered is that the railroads, as a result of the large war earnings which permitted debt retirement and the refunding of obligations at the prevailing low rates of interest, have effected some very substantial reductions in fixed charges. As a result, the reported fixed charges of preceding years must always be adjusted for the reductions in fixed charges that have taken place. In the cases of a number of roads these reductions ran as high as 50 per cent. For example, it is going to be much easier for the Nickel Plate to earn charges of approximately 3.5 million dollars, which it will have when it refunds the present $3\frac{3}{4}$ per cent bonds, than it was for the Nickel Plate to earn 7.6 million dollars prior to the war.

In calculating fixed charge coverage, therefore, it is necessary to take the *present* fixed charges. Not even the fixed charges that were reported for the last fiscal year in which a refunding took place will provide accurate results. This is due to the fact that in any year of heavy refunding there is not only the factor of the higher interest obligation being outstanding during a portion of that year, but, since the old bonds are called subsequent to the sale of the new issue, there often are duplicate charges for three, four, or six months, and sometimes even longer. In fact, when the railroads were paying excess profits taxes they at times anticipated maturities or the call-of-bond issues by as much as a year, since a large percentage of the cost involved was being paid, in effect, by the Treasury.

The result was that approximately two billion dollars in railroad obligations were paid off during the war years. In addition, perhaps a billion or two more were refunded with lower coupon obligations, thereby effect-

ing a larger savings in interest charges than is indicated by the mere retirement of debt.

As an example of a railroad that has effected a really sharp cut in its interest requirements partly as a result of debt retirement, but chiefly as a result of refunding, we have the Great Northern. The fixed charges of this road were in excess of \$19,000,000 annually a few years ago. As a result of its recent refunding, these charges will be down to a little over \$8,000,000, a reduction of nearly 60 per cent.

If we apply the present fixed charges of the Great Northern against past years' earnings, as we must in calculating its credit standing, we shall find that we get a very much better picture than if we were merely to use the reported fixed charges for those years. For that reason the Great Northern was able to refund its bonds virtually on a money basis indicating the high credit standing the road now has.

In addition, it is necessary to consider the fact that the railroads, as a whole, have greatly improved their working capital position. It is not uncommon for a road that has its fixed charges down to three or four million dollars to have a working capital position of thirty or forty million dollars. Therefore, such a road not only has the advantage of a sharply lower level of fixed charges but also has the advantage of a working capital position which, if conservatively handled and not spent in any short period on improvements and so forth, could give substantial protection for the payment of fixed charges over a long period of years, even though earnings might be poor.

The two big factors in improving the credit position of the railroad industry, therefore, have been the sharp reduction in interest requirements, both through debt retirement and refunding, and the very great improvement in the working capital position of the industry.

PERCENTAGE OF GROSS CONSUMED BY FIXED CHARGES

The second criterion we might use would be the percentage of gross consumed by fixed charges. The rule-of-thumb figure used before the war was that if less than 10 per cent of gross was consumed by fixed charges, that is, less than ten cents of each dollar of gross required for fixed charges, the road was rather conservatively capitalized from the standpoint of debt structure. If its fixed charges were greater than 10 per cent of gross, they were considered to be rather excessive. It is probable that in the postwar years, as a result of a sharp increase in expenses and reduction in interest rates, that figure of 10 per cent may have to be reduced since it may prove rather high.

Taking any of the war years, we shall find that the percentage of fixed charges to gross was much smaller than 10 per cent for almost any system,

with the exception of the heavily overcapitalized systems that are in bankruptcy. This was due to the fact that the gross revenues during the war went up, on the average, $2\frac{1}{4}$ times. However, with revenues declining and expenses increasing, fixed charges will again represent a larger percentage of gross revenues, and it is possible that 7 or 8 per cent may prove to be the postwar limit in determining whether fixed charges are excessive.

ABILITY TO MEET MATURING OBLIGATIONS

Another factor in determining the credit of the railroad would be the ability of a particular road to meet its maturing obligations. This, of course, depends to a great extent on the attitude of the market. If the market is in such a condition that it will not take a refunding, the railroad, as a result, will have a poor credit standing. But if the market is optimistic about almost any railroad and does take a refunding, then the credit standing is automatically improved. Obviously, the basis for that improvement does not lie with the railroad itself but is due to the fact that optimism toward the industry will necessarily vary with the actual prosperity of the industry, the history of the industry, and the experience of the immediate past.

There was no question, even during the depression, that the very highest grade rail obligations were as good as the highest grade public utility and industrial obligations. For example, the Norfolk and Western earned its fixed charges ten and twenty times over. Yet the very high grade rail obligations provided a yield that was a quarter or one-half of 1 per cent greater than comparable utility obligations. And the reason for that was the generally apathetic attitude of the investing public and the investing institutions toward railroad obligations.

This does not appear to be true at the present time, although we might find just a shade of difference in the relative yields of railroads compared with similar quality public-utility bonds and industrial bonds. This is perhaps true because in the case of industrials there are relatively fewer outstanding. In the case of public utilities, the feeling still exists that they are a growing industry, and for that reason we can afford to take a slightly smaller yield on a public-utility as compared to a railroad bond. But the difference has largely disappeared and, as a result of that, the ability of railroads to meet their obligations through refunding—and that is really the only method that can be relied upon, if a road has a sizeable amount of obligations to meet—has greatly improved.

As an example we might take the Western Maryland which is a relatively small road and has a large issue of about \$50,000,000 of first mortgage bonds maturing in 1952. Those bonds sold at a large discount

throughout the 1930's, with the exception of 1930 and early 1931, before rail credit collapsed, and 1936 and 1937 when we had a temporary improvement in rail credit. Obviously our appraisal of Western Maryland securities depends upon our estimate of their ability to meet that 1952 maturity. At present this bond is selling on a yield basis of around 2.75 per cent, indicating that the road's credit has improved because of the improved attitude of the public toward the railroads. In other words, the feeling is that this road will be able to meet its maturing obligations by means of a refunding operation.

HISTORY OF RAILROAD CREDIT

Before taking up the analysis of mortgage liens, we shall trace briefly the recent history of railroad credit.

In the 1932 bond panic, practically every obligation, sound and otherwise, went to a very sharp discount, the difference being that unsound obligations went to a discount of 95 per cent and sound obligations went to a discount of 45 per cent. However, this panic was not peculiar to the railroad industry alone.

The story is told that some of the sharp traders were trading municipal bonds for 19 points, buying them in panicky markets for 62, for example, and selling them in less panicky markets at 81. This merely is an indication of the thorough demoralization that existed at that time due to the run on the banks and the fact that the banks were forced to liquidate many of their holdings in a valiant effort to meet those runs. Of course, the entire financial structure of the country was severely strained and the effects were felt on all types of credit. Thus, we may say that the condition of railroad credit at that time reflected a general situation as far as the market was concerned.

When the entire financial fabric began to improve, in about the middle thirties, as a result of various measures taken by the government to increase the liquidity of the banks, the standing of railroad bonds began to improve as did other obligations. Of course, the obligations of those roads that had fallen by the wayside and had gone into bankruptcy did not reflect this improvement. But by 1937, taking the 1935-1937 period as the period of temporary recovery in railroad credit, nearly all solvent railroad bonds either sold at par or at a discount of not more than 10 or 15 per cent.

This again represented a participation in the general recovery of fixed obligations. However, on the basis of fundamental considerations one might question why this improvement occurred with such rapidity in view of the fact that the earnings were recovering at such a slow rate. A probable answer is that there was a great deal of confidence in the

fundamental stability of railroad obligations, which was a carry-over from periods prior to the depression, when every temporary period of bad business was followed by a new high in railroad prosperity simply because it was a growing industry. The railroad investors, therefore, might be said not to have fully realized, even by the late 1930's, that competition had definitely put the industry in a much poorer position than it had held in the 1920's.

COLLAPSE OF 1938

The final collapse occurred in 1938. In that year there was a short but very sharp recession. For the railroads it was particularly severe because, among other reasons, they had granted a wage increase in late 1937. In addition, the railroads had become more liberal in their budgeting of expenditures so that, particularly in the early months of 1938, the railroads were still spending rather liberally in comparison with the preceding years. As a result of this combination of factors, the increased costs, the very sharp recession in business, and the rather liberal expenditures made by certain lines because of budgets that had been drawn up when earnings were still good, the railroads in February, 1938, for the first time throughout the depression years, began to operate at a deficit before the payment of fixed charges.

Of course, by that time the institutions had seen a satisfactory recovery in their holdings of municipal bonds, public utility bonds, and government bonds. Thus, it became almost the universal practice to liquidate railroad holdings.

WARTIME RECONSTRUCTION OF RAIL CREDIT

For a number of years the market reflected that attitude toward railroads. Even when railroad earnings reached their peak during the war, which was in 1943, railroad obligations, with the exception of a few good roads, were still rather depressed. This was particularly true in 1942 when earnings were higher. However, this undoubtedly represents the usual lag between the time when the actuality changes and the psychological factors are dissipated.

The wartime reconstruction of rail credit, as we previously indicated, was due to the two-fold effort of the industry: (1) to reduce its fixed charges through both debt retirement and refunding at lower coupon rates when possible; and (2) to accumulate vast liquid resources which greatly exceed anything the railroads ever had. And when we compare the 2.2 billion dollars of current assets held by the railroads with the diminishing amount of railroad obligations, which total approximately 8 billion dollars, including obligations of roads in bankruptcy which will be reduced

through the reorganization process, we have a very sound financial basis for the improvement in rail credit.

OBLIGATIONS OF SOLVENT ROADS

With respect to railroad mortgages, we come to a fascinating but also difficult study. The railroads, when they were originally built, generally put a mortgage on each individual piece of line. Unless a railroad went through reorganization, such as many are now undergoing, or had gone through reorganization in the past and disturbed its underlying liens, which was not a general practice, we find that railroads generally have large numbers of mortgage obligations outstanding covering different sections of the system. The railroads that have never been in bankruptcy, such as the New York Central and the Pennsylvania, are often those which have the most complicated debt structure. Those railroads which underwent bankruptcy at some time in the past, such as the Katy, the Chicago, Milwaukee and St. Paul, and the New Haven, generally speaking, will have fewer underlying liens.

Because of the large number of railroad liens which comprise the debt structure of individual roads, the Copeland Traffic Density Service, which we described briefly, was created. Institutional investors, investment services, and investment houses found it necessary to determine the exact position that a particular lien held in relation to the others of the same system. In other words, they needed a means to determine which lien to buy if they were buying for long-term investment and wanted some protection against the eventuality of bankruptcy in a bad period, such as we had in the 1930's. This traffic density service was developed to meet the needs of these investors by indicating the number of tons moved over any particular stretch of mileage in the year in which the individual map was prepared, and the direction in which it had moved.

In using the Copeland service it is, of course, necessary to know what mileage is covered by the particular lien in which one is interested. And for that purpose the White and Kemble mortgage maps provide a convenient source of reference.

For example, if we were interested in the Pennsylvania Railroad Consolidated 4's of 1948 we could determine, by consulting the mortgage map, that this obligation is secured by a lien on the track running from Trenton to Pittsburgh. By consulting the traffic density map we may then determine the traffic density for that section of track and the direction in which the traffic flows.

To illustrate the significance of these services it is interesting to note that one third of the mileage of the country has such light traffic density that it carries only 2 per cent of the freight. On the other hand, 10 per

cent of the mileage has such very heavy density that it carries 50 per cent of the freight. Obviously, the very heavy density mileage is earning much more money than the light density mileage. Therefore, other things being equal, the heavy density mileage offers the most desirable liens.

Generally speaking, it is also desirable to have an evenly distributed flow of traffic in both directions. Obviously, instead of having very heavy density in one direction and no density in the other direction, it would be much more economical if the freight was evenly divided and it was possible to haul full cars in both directions.

However, there are exceptions to this statement. The Virginian Railway, for example, carries nearly all its freight in one direction, from the coal mines to Norfolk, but is a very profitable railroad because the density is extremely high in that one direction. Also, the grade from the coal mines to tidewater is practically all downhill, which makes for great economy of operation.

The same thing is true of the Great Northern, which, as we indicated, has a very heavy volume of business in iron ore in the northwestern area. It has a trip of about 110 miles to Superior and Duluth, almost all of which is downhill.

However, if we eliminate those unusual instances, the rule would still stand that where the traffic is evenly divided we would have a lower operating ratio.

SIGNIFICANCE OF TONS PER MILE

From the tons-per-mile figure itself, it is possible to determine only whether the particular mileage is used heavily, moderately, or lightly, on a relative basis. In normal times, a density of somewhere between one and two million ton-miles would be an average density. If it is under a million ton-miles it is very light density mileage. If it is over two million, it is considered to be rather heavy. If it runs to eight, ten, or twelve million, it is very heavy. Probably the heaviest density mileage in normal times was about eight million tons per mile on certain sections of the Pittsburgh and Lake Erie, the Great Northern, and the Chesapeake and Ohio. During the war this was increased to about fourteen or fifteen million tons per mile.

The tons-per-mile figure will give no indication of what the coverage on the bonds is likely to be, because it does not give the amount of debt outstanding. We may have a situation such as that of the Lackawanna of New Jersey, which had, in 1946, \$10,000,000 in first mortgage bonds on a twenty-six mile stretch of line. It is a cut-off line from the Delaware, Lackawanna and Western. Even though the density is rather

heavy on that section, certain adverse factors made that bond a rather weak one, and the bond sold at 76. These factors include the rather poor credit of the system as a whole, due to its inability to earn its fixed charges in the prewar years, and its failure to show any very marked improvement during the war because of the nature of the road. It relies rather heavily on anthracite, and did not have the heavy war business of the western roads in the movement of military traffic or the heavy manufacturing business of the eastern roads serving war plants. Another factor was that while it effected a moderate reduction in fixed charges this reduction was not comparable to that of many other systems. A third factor is that it operates in New Jersey and is subject to very heavy taxes. Its debt is very heavy for the amount of mileage it covers, being nearly \$400,000 per mile in 1946.

So we find that whereas the tons per mile on the Delaware, Lackawanna and Western main line is fairly heavy, if we divide it by the amount of debt outstanding we get a rather poor index figure, the index figure being the net ton-miles per dollar of debt.

TON-MILES PER DOLLAR OF DEBT

From this we gather that the two vital Copeland figures are the tons carried per mile in any given year and the ton-miles per dollar of debt. The latter figure is the tons carried per mile multiplied by the number of miles covered by a mortgage lien and divided by the amount of bonds outstanding.

For example, let us assume that we have a figure of 3,000,000 tons per mile, that there are 100 miles securing the mortgage, and that the mortgage is \$10,000,000. We would multiply 3,000,000 by 100, getting a figure of 300,000,000, and we would then divide that figure by 10,000,000. Our index figure would then be 30; that is, 30 ton-miles per dollar of debt.

Offhand, if we were analyzing railroad bonds before the war, we would consider that a fair figure. It is not very high, but is probably high enough to cover the mortgage lien by a small margin. As we indicated, this figure will probably have to be revised upward because railroad operating costs have gone up considerably more than the amount that can be saved by efficiency, and a good deal of the optimism toward the rail industry at the present time is based on the feeling that the level of traffic will continue to increase.

AVERAGE REVENUE PER TON-MILE

Copeland will also give a figure, which can be found in Moody as well, indicating the average revenue per ton-mile. Roads which carry a large proportion of coal, oil, and other heavy materials which are moved at a

low tonnage rate, even though they may be moved at a wide profit margin, will have a low average revenue per ton-mile figure. The Chesapeake and Ohio, for instance, will have a figure of 7 or 8 mills. On the other hand, a road such as the Atlantic Coast Line, which carries little coal and has the advantage of the high rates in the south, may have a figure of 1.2 or 1.4 cents. The average revenue per ton-mile for the industry as a whole is slightly under one cent.

Assuming, however, that the average revenue per ton-mile in this case is one cent, this bond will have thirty cents of revenues supporting each dollar of debt. It may actually have a little more or a little less, depending on the type of freight which goes into that mortgage lien. Whereas the later maps separate coal from all the rest of the commodities, so that it is possible to determine how heavily the figure is weighted with the low revenue per ton-mile from coal traffic, it is not possible to arrive at any definite conclusion as to the actual makeup of the other freight carried on that line.

INCOME AVAILABLE FOR FIXED CHARGES

We may then take the proportion of revenues, which the system as a whole carried through, to income available for fixed charges before income taxes.

We shall take one railroad as an actual example. The Chicago, Burlington & Quincy Railroad in 1944 showed gross revenues of \$240,000,000 and income available for fixed charges of \$33,287,000. The 1944 income taxes were \$43,000,000. To get a proper grasp of what the railroad actually earned before it paid its federal income tax we add \$43,000,000 to \$33,287,000, getting a total of \$76,287,000. If we divide \$76,287,000 by the total revenues, that is, by \$240,000,000, we shall see that the road has about thirty cents out of each dollar available for its bond interest—bond interest being an expense that is more properly figured before federal income taxes.

The utility industry has always followed a policy of figuring the amount available for bond interest before taxes and after taxes. That policy was not generally followed by the various services as regards the railroads until recently. Obviously, the more important figure for fixed charge coverage is that before federal income taxes. However, the amount paid in federal taxes—and the figure, therefore, after the payment of federal taxes—is also an important one as it indicates the percentage of the additional income that was actually retained.

Let us take this figure of 30 per cent carried through to net before charges. That is a very high figure, but it is the kind of figure the railroad industry was likely to show during the war. However, if we apply

this 30 per cent figure to the hypothetical calculation (page 281), it is clear that, out of the thirty cents per dollar of debt that the road had available to cover its mortgage bonds, nine cents was actually carried through and was available for fixed charges.

That, again, is a system average. There may be conditions affecting the lien, such as steep grades where operating costs are above average; or, the high density of the mileage may cause those costs to be below average. However, unless we wish to make adjustments on the basis of experience, it is best to take the system average.

We then have nine cents available to cover the fixed charges on each dollar of debt outstanding. Thus, if the interest rate is 4 per cent, we would have a coverage of 2.25 times. Without any adjustments, that is the most accurate figure we can get on the basis of the Copeland maps.

It is possible, however, to make certain refinements by calculating in this manner: If the system has an average density of two million tons per mile, and the particular lien under consideration has a density of four million tons per mile, it is a safe assumption that the operating ratio is lower on that particular lien than for the system. In other words, more than 30 per cent will be carried through before taxes. It would be justifiable, in that case, to make an upward adjustment to 40 per cent or thereabouts.

In other cases, the lien may have an unusually low density, or we may know that that particular mileage has steep grades and curves, or that the type of traffic carried over that mileage carries a lower than average rate. In other words, whatever other information is available can be used to refine results obtained through the use of the Copeland figures.

If the Copeland figures are not available, it is necessary to resort to a certain amount of guesswork. Of course, if we have a Pennsylvania bond which is secured by a first lien on the mileage from Philadelphia to Pittsburgh, it would be a reasonable assumption, even if we did not know how much traffic went over that mileage, that since the road as a whole is profitable, and since profitable railroads usually draw their heavy density from their main line, that this lien is a profitable lien.

That does not always follow, unfortunately, although it is usually true. We have had the startling example of the Boston and Providence, which was a guaranteed stock of the New Haven, that paid dividends after the road went into bankruptcy. It was selling at 140 in 1936, a year after bankruptcy, and then dropped to 12 five years later, when the road decided it would make a segregation study. A segregation study not only determines what freight and passengers actually move on a line but it determines the expenses that should be allocated to that line, as well as

the exact amount of the freight rate that should be applied to the freight moving over it.

As a result of this study it was found that the main line of the New Haven between Boston and Providence, a four-track line, was actually losing money because of high taxes and other factors.

OBLIGATIONS OF INSOLVENT ROADS

In so far as the reorganization situation is concerned, new bankruptcy legislation has been passed by the Congress affecting the railroads of the United States.

Prior to the depression, railroads were reorganized under equity receivership. That meant agreement among creditors, sale of the property under foreclosure, and the issuance of new securities to creditors to transfer their interest in the property into new securities of the reorganized company.

In the past, the stockholders were generally given an opportunity to maintain their equity by investing new money in the property. In the process of reorganization the stockholders might be asked to buy new first mortgage bonds to the extent, let us say, of \$25 per share. In that way the railroad got new money and the stockholders retained their equity or at least a portion of it.

That whole reorganization picture changed in 1933 when Section 77 was enacted. The objective was to get an agreement among creditors and hasten reorganizations. The actual result, however, was the opposite. The process involved statutory bankruptcy, as contrasted to equity proceedings. Each point of a reorganization plan could be challenged in the courts, and most frequently was challenged, resulting in extended litigation. Consequently, railroads usually remained in bankruptcy for ten years or longer.

Under Section 77, the ICC was to write the ultimate plan of reorganization, although different plans might be filed by bondholder committees, by shareholders or by trustees.

The ICC determined the valuation of the property on the basis of the changed conditions which had brought on the bankruptcy. It decided the size of the capitalization which the earnings of the property, or the prospective earning power, could support. It also determined what the various securities should receive in satisfaction of their claims. In other words, in the case of a senior lien, the ICC decided just how it would be protected; in the case of a junior lien, it decided just what it would receive; and it decided just what the old equity holders would get, if anything.

On the basis of most of these ICC plans, after the distribution of the

new securities to the creditor claims—that is, the holders of the old mortgages—which included a considerable amount of past-due interest as well as principal, there was nothing left for the equity owners. It was natural, therefore, for the equity owners to take action in an attempt to get improved treatment. Thus, the equity holders in practically every case objected to the court on the basis that they were entitled to share in the assets.

In almost every case, however, their objections were swept aside. The Supreme Court, in the St. Paul case in 1943, upheld all the lower federal courts in wiping out the equity holders in that reorganization. By refusing to review the Chicago & Northwestern case and accepting the Circuit Court's decision, which also wiped out the equity holders, the same result was brought about.

RECENT LEGISLATION

During the war period railroad earnings expanded very sharply. Fortunately the railroads in bankruptcy, bearing in mind the poor accounting methods of the railroad industry generally, had a broad base upon which to claim exemption from excess profits taxes. This broad base, together with the fact that these roads had had poor earnings, enabled the railroads in bankruptcy (at least in 1942 and 1943, and, for the most part, in 1944) to avoid the payment of excess profits tax. Their earnings, therefore, rose phenomenally.

For example, the Missouri Pacific, which throughout the 1930's had somewhere between \$6,000,000 and \$13,000,000 available for fixed charges, had \$51,000,000 available for charges in 1942. That \$51,000,000 not only covered the old charges and the old preferred dividends about five times over, but left \$32.67 per share for the old common. Thus, it was only natural that the old shareholders should see some ray of hope, since this improved condition was, to some extent, characteristic of many of the bankrupt roads.

In 1945 the Hobbs Bill, which was the first bill designed specifically to protect the old stockholders in reorganizations, was passed by the House of Representatives with only one dissenting vote. The Hobbs Bill, however, made no progress in the Senate and for that reason similar legislation was passed in 1946 in an attempt to get Senate action.

The Hobbs Bill provided that the capitalization of a reorganized road could not be reduced below what it was previous to bankruptcy or below the ICC valuation. And it was intended that the valuation made by the ICC prior to bankruptcy be used in determining the capitalization of the new systems. The result was that it would have been necessary to in-

crease very considerably the minimum capitalizations provided in reorganization plans.

In some cases, this would have improved the treatment of the old stockholders. In every case, however, differences of opinion were bound to arise between creditors and stockholders because the Supreme Court has ruled that if a creditor is to be given a security qualitatively inferior to that which he had before bankruptcy, there should be some quantitative adjustment. The ICC took the position, however, that the new securities were as good as the old, even though they might be preferred shares rather than mortgage bonds. The basis for this position was that in the reorganization plans, the capitalizations were cut so sharply that it did not make much difference whether the bondholders were given a security that actually had property directly securing the obligation or were given a senior stock issue. The assumption was that, in view of the reduced capitalizations, earnings under favorable conditions would be sufficient to provide adequate income for all of the new securities.

One point which might have made the Hobbs Bill unworkable was that it would have been extremely difficult to obtain agreement as to whether the new securities were equal to the old, considering the enlargement of capitalization which would take place over what the ICC had originally indicated was safe and in line with earnings expectations.

The Reed Bill, in principle, followed the Hobbs Bill. However, in the Reed Bill a different criterion was used. It was provided that if a railroad had earned its fixed charges on the average in the past seven years, it should be allowed to come out of reorganization in some other way than by a recapitalization under Section 77 as approved by the ICC; and that it should be given a period of eighteen months in which to work out some kind of solution with its creditors. The type of solution was left vague. However, it was hoped (1) that in actuality a solution could be worked out in which the creditors would accept temporary deferment of their interest or an extension of principal; (2) that it would be possible to fund the past-due interest in some way, or pay it off; and (3) that some kind of composition of claims could be worked out that would meet the approval of creditors. The percentage to be required for approval of such a plan was to be simply a majority, or holders of 51 per cent of the securities.

Subsequent to the passage of the Reed Bill by the House, the Senate conducted an investigation of railroads in reorganization and held extensive hearings in Washington. As a result of these hearings, the so-called Wheeler Bill was drafted and was reported to the Senate by the Senate Interstate Commerce Committee with certain amendments. In broad terms this bill provided for voluntary reorganization under the supervi-

sion of the ICC, giving the stockholders and creditors one year in which to accomplish such reorganization. This period may be extended by the ICC. However, if efforts toward a voluntary reorganization fail, the ICC may promulgate its own plan and put it into effect, giving due consideration to the improved financial conditions of the bankrupt roads so as not to wipe out the stockholders.

In 1948, legislation similar to the Wheeler Bill was passed by both houses of Congress and approved by the President. This legislation, known as the Mahaffie Act, was similar to the old McLaughlin Act which had expired, but included provisions to make possible stock recapitalizations to permit systems with large preferred arrears to simplify their capital structures with the approval of holders of 75 per cent of affected securities. Thus, the new Mahaffie Act can be used either to defer interest and principal payments where a road cannot meet its debt service requirements or to eliminate preferred arrears where debt requirements are not threatened. It also provided that roads which were operating under Section 77 might switch to Mahaffie Act reorganization if the necessary approval of security holders can be obtained. Mahaffie Act plans were put entirely under the jurisdiction of the Interstate Commerce Commission with no Federal Court approval necessary.

PROBLEMS IN APPRAISING SECURITIES OF BANKRUPT ROADS

In view of this new legislation it becomes clear that the appraisal of securities of bankrupt roads is rather difficult at the present time. It is necessary first to determine, if possible, whether the reorganization plan of the road is likely to go through as now drawn, and, if not, what kind of plan would be feasible under the legislation which is going to be enacted.

Some bankrupt roads such as the St. Louis Southwestern have cured their default through payment of all past-due interest. They took the position that they were solvent properties again, having paid off all they owed their creditors, except the principal of unmatured bonds. Obviously, we can value the securities of these roads on the basis that they have emerged from bankruptcy without any substantial change in their capitalization.

However, in the case of the Missouri Pacific, there is over \$100,000,000 of past-due interest to consider. Certain bond issues have matured, or are about to mature, and deals would have to be made with the creditors which would tie up the bulk, if not all, of the earnings of the system for a good many years. In such a situation, reorganization under the Mahaffie Act would be very difficult, if not impossible. Reorganization under the Mahaffie Act is, in effect, a moratorium on interest and principal

payments until such time as earnings make it possible for the road to meet these requirements.

If we conclude that a railroad will go through with a reorganization substantially the same as that which is now under consideration by the courts, as in the case of the Missouri Pacific, the best thing to do would be to take the package of new securities which we will receive under the plan, and evaluate them on the basis of what similar securities now outstanding are selling for.

In appraising the securities of roads undergoing Mahaffie Act reorganization, we must take into consideration the nature of the changes to be made and, on the assumption that the plan will succeed, appraise the securities in their changed form. Thus, if interest on a bond is made contingent upon earnings or its maturity extended, the effects of such a change must be taken into consideration. If the market price of the security had declined to the extent that Section 77 bankruptcy had been discounted, the likelihood of a milder form of recapitalization might justify a higher price under a Mahaffie Act readjustment. In the case of stock recapitalizations under the Mahaffie Act, the elimination of preferred arrears often improves the value of both preferred and common equities of a railroad by paving the way for larger dividend disbursements.

REVIEW QUESTIONS

1. What information about railroads is available from:
 - (a) Reports of Association of American Railroads?
 - (b) Reports of Shipper's Advisory Boards?
 - (c) Reports of Interstate Commerce Commission?
 - (d) Copeland Traffic Density Services?
 - (e) White and Kemble Mortgage Maps?
 - (f) The Official Guide to the Railways?
 - (g) Railway Age?
 - (h) The various financial services?
2. Of what significance are weekly carloading figures?
3. In calculating the fixed charge coverage, why is it essential to use the present fixed charges as the basis rather than to use the historical fixed charges of the past decade?
4. What influence have current market factors over the ability of a railroad to meet its maturing obligations?
5. What wartime factors contributed to the reconstruction of railroad credit?
6. In comparing the capitalization of railroads, what adjustment is customarily made for leased rental expenses?
7. What per cent of capital structure of a railroad is usually in fixed charge obligations and capitalized lease rentals?
8. Account for the complicated debt structure of railroads.
9. Of what importance is the underlying security of a railroad first mortgage bond when the railroad currently enjoys a good credit standing?

10. What factors are considered in evaluating the underlying security of a railroad first mortgage bond?
11. What is the significance of the "tons-per-mile" ratio? What is the normal ton-mile density?
12. What is the significance of the ratio "ton-miles per dollar of debt"?
13. What is the significance of the average revenue per ton-mile? What is a representative figure for the industry as a whole?
14. Under Sec. 77 of the Bankruptcy Act, what are the responsibilities and duties of the Interstate Commerce Commission?
15. What tax benefits accrued to bankrupt railroads during the war and thereby contributed to better than average earnings?
16. What problem is interjected in the valuation of a railroad security when the railroad is bankrupt?
17. Account for the spread between the market value of old securities of a railroad about to complete reorganization and the when-issued value of the new securities for which they are to be exchanged.
18. What are the main factors to consider in evaluating the securities of a railroad by reason of the railroad being insolvent?

ANALYSIS OF INDUSTRIAL SECURITIES

by Dr. Harry G. Guthmann, *Professor of Finance,
School of Commerce, Northwestern University*

IN MOST WRITING outside of the investment banking field, when an industrial corporation is mentioned the reference is to a manufacturing corporation. However, in the language of the investment banker the term *industrial* has a much broader meaning. The industrial classification includes almost all kinds of private unregulated competitive businesses other than railroads, public utilities, banks, insurance companies, real estate companies, and investment trusts.

In general, the three main types of enterprises included in the field of industrials by investment bankers are (1) *manufacturing* businesses, (2) *merchandising* business, and (3) *extractive* or *mining* companies. They are sometimes referred to as the three M's.

There are, however, some businesses which have some of the economic characteristics of these three main types but which do not fit exactly into any one of the three. For example, there are certain types of service companies, such as taxi cab companies, which are included in the industrial classification. Likewise, the air transport companies are included even though they are to some extent regulated. Similarly, the steamship companies are included. The lumber industry cannot accurately be considered an extractive industry or a manufacturing industry; it is, nevertheless, included under the industrial heading.

COMPARISON WITH PUBLIC UTILITIES

In spite of the fact that the industrial classification is an extremely broad one, including a great variety of dissimilar businesses, it is found that the class, as a whole, has certain rather well-defined characteristics which differentiate it from other classes such as the public utilities, for example.

COMPETITION

The first characteristic difference is that industrial businesses are more clearly competitive businesses than are the public utilities. As was noted

in a previous discussion, public utilities are generally considered to be monopolies. It is felt that they operate more efficiently on a monopolistic than on a competitive basis. Of course, those who believe in socialism feel that this principle also applies to the industrial field, but those who favor the system of private enterprise know that industrial growth and valuable economies arise out of competitive conditions that would not occur under a monopoly system. While it is true that instances of competition are found in the public utility field, such competition generally involves competition between an established private utility company and a governmental power project, federal or local. Where such a situation exists it is likely that sooner or later one will give way, the result being monopoly either by the public unit or the private corporation. Naturally, there is competition between certain *types* of public utilities, for example, between gas and electric companies. However, this is considerably different from the competition found in the industrial field where there is a high degree of competition both within the individual industries and among them.

Some critics of our economic system are inclined to belittle the amount of competition found in present-day, large-scale enterprises. It is probable that these people would be greatly surprised if they were more intimately aware of the keenness of competition even among very large business units. While it is true that some industries are so dominated by a few large units that the competition is somewhat less severe, the financial records of American industry as a whole reveal clearly the highest degree of competition in the large bulk of industries. For example, the United States Steel Corporation was founded at the beginning of the present century as the industrial giant intended to dominate the steel industry. It is interesting to note, however, that, almost from the time this great corporation was founded, it has suffered from increasing competition from other units of the industry, and today enjoys a markedly smaller percentage of the total business than it had at the time of its founding. Furthermore, as far as profits are concerned, it has been noticeably less successful than some of the young and smaller companies such as National Steel and Inland Steel. Even when measured against the average return for many kinds of business, it is found that the rate of return which United States Steel and some of its competitors have earned is somewhat low.

Additional competition is arising in the form of a growing tendency for large corporations to go outside their own field into some other line of business if the profit possibilities are attractive. Anyone who has been watching the growth and expansion of various companies has noticed that many of them have formulated plans for expanding new lines of business

different from those with which they were concerned prior to the war. This includes not only many medium-sized companies which, for the first time, have had their thoughts directed into new lines by war production requirements, but also many larger companies which have similar ideas regarding the possibilities to be found in other fields.

In many cases this will mean intensified competition, particularly in the consumers' durable goods lines such as radios, refrigerators, household appliances, and heating and plumbing equipment. It may well be that some older and well-established companies will be severely affected by the extreme competition that may develop, but, on the other hand, they may continue to enjoy considerable advantages. Obviously, the new competitors will be faced with marketing problems with which they are unfamiliar. While production alone was the primary requirement for successful operation during the war, the government being the only customer, selling to private consumers involves problems of expert merchandising that are as numerous and as difficult as the problems of expert production. Regardless of the problems and the inevitable disappointments that will occur, it is this sort of economic activity which gives American industry a flexibility and a high degree of competition almost unknown in any other economy.

OTHER DIFFERENCES

A second characteristic difference between industrials and public utilities lies in the greater stability of gross and net revenues enjoyed by the typical company in the public utility field. The industrial field is characterized by much larger fluctuations in gross and net incomes. Obviously, this statement must be made with a certain amount of caution since there are industrial concerns which, if studied over the past years, show records that compare very favorably with the better class of utility. The statement is broadly true, however, and if a cross-section of industrial businesses is taken, generally it is found that their net profits fluctuated much more widely during the difficult period of the 1930's than those of the utilities.

REGULATION

A third difference between industrials and public utilities is that the industrials are relatively unregulated, although, of course, during the war period there was more than ordinary regulation of normally competitive business.

Regulation is generally regarded as applying to three things, namely, the prices of the products or services, the quality of the product or service to be rendered, and financing. All three types of regulation prevailed as

regards public utilities and railroads. It was mainly through the Office of Price Administration that regulation was applied to the industrial field through its efforts to regulate prices and the quality of product.

CHARACTER OF ASSETS

A fourth difference has been noted in previous discussions, namely, the difference in the character of the assets. In general, industrials have a much higher proportion of current assets and a smaller proportion of fixed assets. It is commonly found that manufacturing companies will have as much as 50 per cent of their assets in current form; whereas, in a typical public utility, as much as 90 per cent of the assets may be in fixed form. In merchandising companies there is frequently a higher proportion of assets in current form, at times running as high as 90 per cent.

There are some kinds of industrial businesses for which this generalization is not entirely true. Mining companies generally are likely to show a predominance of fixed assets, although here, again, it is difficult to generalize because much depends upon (1) the valuation placed on the mining claims, and (2) the amount of equipment and construction required to develop the property. As opposed to the typical mining company, an oil company, which has the problems of refining and distribution as well as production, has a variety of operations which make it more like the ordinary manufacturing company. This type of enterprise is likely to have much more in the way of current assets than the mining company generally has. Similarly, some chemical companies are found where substantial sums are invested in equipment and little inventory is carried, since they ship almost as rapidly as they produce, and their sales are made, in almost all instances, on a cash basis. Naturally, there would be, in this situation, a noticeably high proportion of fixed assets.

The fifth, and last, difference that shall be noted here is the difference in turnover of the assets as a whole. In general, there is a high volume of sales in relation to the amount invested in operating assets in the typical industrial corporation. The typical public service corporation will have a relatively low volume of sales in proportion to invested assets. In emphasizing this point, it should be noted that this is one of the factors which make it difficult for a public service corporation to develop a really high rate of return, but make it possible for a successful industrial company to sometimes develop an astonishingly high percentage of profit. On the other hand, the stability of earnings of the public utility is considerably greater than that of the industrial.

SUMMARY

In summary, these are some of the characteristic differences which should be kept in mind in examining the material relating to securities of

nonregulated as contrasted to regulated businesses. The term *public utility* as used below includes the various regulated industries: railroads, electric utilities, gas utilities, and so on.

1. The industrial field is characterized by a high degree of competition, as opposed to the public utility field in which monopoly operations are characteristic.

2. The stability of gross and net revenues is considerably greater in the public utility field.

3. Public utilities are subject to a high degree of regulation. Industrials are unregulated, although they became subject to increasing regulation during World War II.

4. The industrial company generally has a larger proportion of its assets in current form; the public utility a larger proportion in fixed form.

5. The typical industrial company's operation is marked by a high volume of sales in relation to invested assets; the typical public utility by a relatively low volume of sales in relation to assets.

SOURCES OF INDUSTRIAL FINANCING

Preliminary to a discussion of the problems involved in the actual analysis of industrial securities, it will be interesting to consider the sources from which these varied types of securities arise. Such a consideration is important to the investment banker, not only because it will indicate the situations in which his services perform a valid function, but also because a knowledge of the situations out of which securities are created enables him more accurately to determine their value in an analysis.

The investment banker is interested almost entirely, as far as industrials are concerned, in the financing of *established* industrials. This is true for several reasons, the most obvious of which is that the investment banker has a real and continuing responsibility toward the investing public for the securities he sells. Quite clearly, he cannot afford to risk the public's money in untried companies that are in the promotional stage of development, since there is a considerable element of investment risk involved in the financing of the most firmly established industrial enterprise. The element of risk can, however, be more accurately appraised in an established company. Ordinarily, the fact that a company is well established will enable the investment banker to appraise the management of the company, its earnings record, the market record of its securities if they have been publicly distributed, the position of the company relative to others in the same field, and other factors on the basis of which he may determine whether or not he wishes to distribute the securities. A closely related point to consider is that it is much easier for the investment

banker to dispose of the securities of established firms than those of absolutely new companies, and he naturally prefers issues which can be distributed with the greatest facility and the least expense.

In addition to the fact that a company must be well established before investment bankers will distribute its securities, there is the factor of the size of the company to be considered. Generally speaking, the investment banker cannot afford to risk the distribution of the securities of smaller companies no matter how well established and successful they may be. As was pointed out in an earlier discussion, one of the important reasons for this is that the small company is, to a great extent, dependent upon the management skills of one or two individuals, which results in a danger to the continuity and permanence of the organization. At present the smaller companies have a very real problem in connection with satisfying their financial requirements, and it is interesting to note that the Investment Bankers Association of America has a Small Business Committee which has formulated a concrete program for the financing of businesses which are too small to fit into the orthodox investment banking pattern.

NEW FUNDS FOR EXPANSION

One of the most important sources of industrial financing is found in companies which require new funds for expansion of their businesses. Obviously, this need will arise only in businesses that have substantial growth possibilities and which, for that reason, seem more interesting and attractive than those which have reached maturity. In such cases, the analyst is interested in determining the actual extent of the possibilities for growth and expansion when such is the reason for the issuance of securities.

Even a concern that has growth possibilities may not have a large need for new funds from outside the business, since it is sometimes possible to finance expansion through the retention of earnings in the business. For the small or middle-sized company, this may be the only way in which expansion is possible. However, in the case of larger companies, the advisability of distributing dividends and other factors frequently makes it impossible or undesirable to finance expansion in this manner even though earnings are good. Therefore, the great majority of established companies find it necessary to resort to the issuance of securities to provide for at least a part of the funds needed for expansion.

IMPROVEMENT OF WORKING CAPITAL POSITION

Opportunities for financing occur in situations where a corporation desires to improve its working capital position by refinancing, or funding,

its current debt or bank loans. Frequently an operation of this sort is desirable and results in the issuance of sound securities. The analyst, of course, is interested in determining the improvement which will occur in the company's affairs and the effect that it will have on future operations.

If the short-term debt is paid off with funds derived from the sale of stock, the operation is referred to as *refinancing*. If the security that is sold is a bond, the operation is termed a *funding*, which is the term applied to the conversion of short-term liabilities into long-term or bonded debt.

Frequently, there is a conflict of ideas as to whether such an operation is desirable from the standpoint of the company. At present, short-term bank loans bear extremely low interest rates and there is a decided advantage in their low cost. Consequently, if a company converts its short-term bank loans into a long-term bond issue, it is almost certain to increase its interest costs, and, therefore, the argument must be that the advantages to the company will be worth the extra cost. One advantage to be gained is the removal of immediate short-term liability which might cause difficulty should untoward conditions arise requiring payment. Another advantage is that by a funding operation these particular interest costs are fixed for a long period of time, thus eliminating the problems involved in the fluctuation of interest rates. Finally, the debt retirement program may be made less burdensome to the company by pushing the maturity over into the future, as the retirement program likely to be involved in connection with bank loans, even term loans running for a period of years, will tend to require rather rapid repayment.

REFUNDING AND REFINANCING

A third source of industrial financing lies in refunding and refinancing operations. Refunding involves the replacement of an existing bond issue (a debt that has already been funded) by another bond issue. Refinancing involves the replacement of a bond issue or a stock issue with stock, or the replacement of a preferred stock with a bond issue.

The most common reason for the refunding of a bond issue is that a lower interest rate is obtained thereby. Naturally, in the current period of extremely low interest rates, there have been a considerable number of operations of this type.

Another important reason for refunding is to extend the maturity of the debt. Occasionally there are situations in addition to these, but they are likely to be much less important. For example, it is possible that a company might need to expand its debt and that it might be desirable to refund its existing debt simultaneously in order to maintain a simple debt

structure, or to avoid difficulties that might exist in the form of liens or onerous conditions in connection with the original funding.

As was mentioned above, refinancing involves the substitution of stock for bonds, or bonds for preferred stock. It is interesting to note that a number of corporations have refinanced preferred stock issues in this manner, the most important argument for doing so being that the cost to the corporation has been lowered.

When a company substitutes a bond issue for preferred stock for the purpose of reducing its costs, there are two costs which are reduced. First, the interest cost will be less than the cost involved in the preferred stock dividend. Second, under the present law there will be a reduction in federal taxes.

In order to illustrate this, let us work through a hypothetical case. Let us assume that in situation A, a company has a preferred stock issue of \$1,000,000 with a 4 per cent dividend. In situation B the company has no preferred stock, but has \$1,000,000 of 3 per cent bonds. Obviously, the interest requirements of \$30,000 in B represent a saving of \$10,000 over the dividend requirements of \$40,000 in A. In addition, there will be a saving in federal income tax due to the fact that bond interest is a deduction before the computation of federal income tax, while the preferred stock dividend is not a deduction, but must be paid after taxes. To state this another way, to meet the requirements of situation B it is necessary for the company to earn only \$30,000 since the interest is paid before taxes. In situation A it is necessary for the company to earn not only the \$40,000 preferred dividend, but, in addition, enough to pay the income tax which comes before that dividend. Assuming that the corporation pays a 40 per cent income tax, it would be necessary for it to earn \$66,667 in order to meet the preferred dividend requirements of \$40,000. To clarify this still further, let us suppose the earnings in both situations to be \$66,667, and the tax rate in both bases to be 40 per cent. In situation A, the company is liable for taxes on the entire amount of \$66,667, or \$26,667. After payment of the preferred dividend there is no balance to accrue to the benefit of the common stock. In situation B, the company is liable for taxes only on the \$36,667 balance left after payment of bond interest, or \$14,667. The balance of \$22,000 will be available to the common stockholders, or for the retirement of the funded debt.

On the other hand there are cases where a bond issue is retired by the proceeds from the sale of preferred stock. One justification for such an operation might be that the company had been forced into a reorganization due to defaulting on its funded debt at some time in the past, with the consequence that it feared a possible repetition. Another justification

might be that it had plans for expansion and desired to use an issue which could be expanded and at the same time leave itself in a position to borrow should the occasion demand it.

REFINANCING WITH COMMON STOCK

A third type of refinancing involves the sale of common stock for the purpose of eliminating bonds or preferred stock. Such refinancing would, of course, result in dilution of the equity represented by the existing common stock, although any fixed charges would be eliminated. Under some market conditions, where the price at which the common can be sold is very favorable to the company in the light of its past earnings and its asset values, it may find these factors sufficiently advantageous to refinance in this manner. Further, the company may feel that there are certain advantages involved in having the simplest type of capital structure there is, namely, one consisting entirely of common stock, in order to leave its credit available for periods of difficulty.

From the viewpoint of the common stockholders, as well as that of the corporation itself, a great deal depends upon the price at which the common stock can be sold. In order to expand this statement, let us consider the different results obtained by the sale of common stock at different prices. Let us suppose that a company has 1,000,000 common shares outstanding and desires to raise \$8,000,000 by the sale of additional common stock. If the stock can be sold at \$40 per share, it will be necessary to sell only 200,000 shares. If it can be sold at \$20, it will be necessary to sell 400,000 shares, or twice as many. At \$10 per share it will be necessary to sell 800,000 shares, or four times as many.

Assuming that this stock must be sold to nonstockholders, let us determine the share of the net income which must be given up to the new stockholders under each of these situations. In the first case, there will be 1,200,000 shares outstanding and the new stockholders will receive $\frac{2}{12}$ or approximately 16.7 per cent of the profits. In the second case there will be 1,400,000 shares and the new stock will claim $\frac{4}{14}$ or approximately 28.6 per cent of net income. In the third case there will be 1,800,000 shares outstanding and the new shares will be entitled to $\frac{8}{18}$ or approximately 44 per cent of net income.

To carry this illustration further, let us determine the effect upon the earnings per share of each of the above situations. Let us assume that this company had earnings in 1944 of \$1,000,000; in 1945 of \$1,500,000; in 1946 of \$2,000,000; in 1947 of \$3,000,000; and in 1948 of \$2,000,000. The earnings per share for each year from 1944 to 1948, with the various numbers of shares outstanding, would be as follows:

	1944	1945	1946	1947	1948
1,000,000 shares	\$1.00	\$1.50	\$2.00	\$3.00	\$2.00
1,200,000 shares	.83	1.25	1.67	2.50	1.67
1,400,000 shares	.71	1.07	1.43	2.14	1.43
1,800,000 shares	.56	.63	1.11	1.64	1.11

It will be seen readily that the extent to which the earnings per share are affected by the issuance of additional shares will have a considerable influence on market price and probable value, since it is customary, as shall be noted when values in common stocks are discussed, to take the earnings and capitalize them at certain percentages or on the basis of multiples.

In the event that the sale of this additional common stock represents the raising of additional funds rather than a refinancing, there will of course be the additional factor of the increased earnings to be derived from the employment of increased capital, and it will be noted that this factor has not been taken into consideration in the above illustration. In any event, it will be seen that common stock financing involves a high degree of timing, since there are many instances of companies which would have been able to sell their common stock in 1939 at less than \$10 per share, but which could later sell it for \$40. Naturally, from the point of view of the stockholder, it is desirable that common stock financing (in a case where the stock is to be sold to outsiders) be undertaken at a time when the least possible shrinkage in earnings per share will occur, or when the possible expansion of earnings is so great that earnings on outstanding shares actually will be increased.

SALE OF EXISTING OUTSTANDING SECURITIES

The fourth source of financing lies in the sale or distribution of existing outstanding securities. In many cases this simply involves the disposition of part or all of large holdings of publicly distributed stocks by estates or individuals faced with the problem of estate taxes and inheritance taxes, or for other equally cogent reasons. More important, however, from an investment banking standpoint is the distribution of the securities of closely held companies to the public. This may occur during a period when markets are high simply because the holder desires to diversify his investments or liquefy his estate in contemplation of death. Sometimes this is done for the purpose of developing a market for securities that were previously unmarketable simply because they were closely held.

One of the problems involved in the last situation concerns the matter of handling the financing in such a way as to achieve the greatest advantage for the original owners, who usually continue their interest in the business. A simple and frequently employed solution to this problem is found in the issuance of preferred stock rather than common. In this

manner the original owners are assured of retaining control of the company and will, under ordinary circumstances, be able to retain a greater share of the earnings.

As an illustration of this last point, let us consider a company that has \$500,000 of earnings after taxes. If the owners were to sell 50 per cent of the existing common to the public, they would give up half, or \$250,000, of the earnings. If the purchasers required a 10 per cent return on their investment, the capitalization of these earnings at that rate would give the stock a market value of \$2,500,000. In the event that the company was recapitalized and a 5 per cent preferred was issued, the capitalization of \$100,000 of earnings at that rate would bring a price of \$2,000,000 for the preferred. In other words, the original owners would give up \$100,000 of earnings for \$2,000,000 as opposed to \$250,000 of earnings for \$2,500,000.

MERGERS

The final source of industrial securities is found in mergers and consolidations. In these situations it is generally true that the stockholders of the original companies forming the consolidation or merger are offered the securities of the new company. Frequently part of the securities resulting from such a transaction are distributed to the public by investment bankers in the event that any of the parties to the transaction prefer to dispose of their holdings in the new company. In the great combination movement that took place in the late 1890's and the beginning of the present century, the considerable amount of common stock sold to the public grew out of this type of situation. Undoubtedly there will be a certain trend in this direction again, although it is difficult to imagine that the practice will be carried out on anything like the previous scale.

In such cases as these, it becomes important that the plan for merger or consolidation be carefully drawn in advance in order to provide the kind of securities that will be most satisfactory in view of the conditions existing at the time the arrangement is made.

SUMMARY

In a brief way the situations which give rise to the issuance of industrial securities have been considered. By way of summary, the sources of those securities have been found to be:

1. Situations where new funds are required for expansion.
2. Situations where it is desirable to improve the working capital position by the funding or refinancing of short-term debt.
3. Refundings and refinancings.

4. The sale of existing securities.
5. Mergers and consolidations.

Obviously, the analyst of any security is interested in the actual reasons for the issuance of that security, and it is for this reason attention has been directed along these lines. In the case of a new issue, of course, the purpose of and reasons for the issue are all-important to the informed investor. While it is true that the situation in which an issue was originated tends to become less important to the majority of investors as that issue becomes seasoned and tested by time, that background will always be an important aspect of the history of the issue to many. Especially will it be of continuing importance to the investment banker.

CONVENTIONS APPLIED TO INDUSTRIAL FINANCING

Certain conventions of the market place apply to industrial securities.

As a practical matter, one might ask what limits shall be applied to the amount of bonds that a corporation can sell, or the amount of preferred stock that a corporation can sell. However, it is important to note that there are no well-defined limits which may be applied consistently. In fact, a great degree of caution should be exercised in suggesting limits in view of the very remarkable things that have been done from time to time that seem to remove all common standards.

What it is intended to suggest is, not that there are inviolable limits governing the issuance of industrial securities, but that there are limits which are generally accepted if the securities are to enjoy *investment standing*. Limits in this latter sense have come to occupy conventional status, and the issuing corporation, no less than the investor, is interested in observing them as related to any particular situation. The corporation wishes to observe the customs of the market place for its own protection, because the conventions or rules of thumb that are suggested are designed to provide a margin of safety in the event of difficult business conditions.

CONVENTIONS APPLIED TO INDUSTRIAL BONDS

To the corporation in need of funds, the extent to which it may incur debt through the issuance of bonds is an extremely important matter. However, while there is no general rule or set of rules which can be applied rigidly, certain customs and conventions have developed, changing as conditions have changed, which it is desirable that the issuing corporation observe. Generally, four types of conventional limitations on the use of bonded debt are considered. These consist of limitations on the amount of debt that may be incurred in relation to:

1. Fixed assets.
2. Net working capital.
3. Capital structure.
4. Earnings.

LIMITS IN RELATION TO FIXED ASSETS

The first limitation suggested is that funded debt in the form of a mortgage bond issue should be limited to a certain percentage of the pledged fixed assets. Generally, the rule which is applied is that such an issue should be no greater than 50 per cent of the replacement value less depreciation of the pledged assets.

In view of the increasing popularity of unsecured financing this rule is more doubtful, perhaps, than it ever was in the past. The theory upon which such a rule rests is that in the event of default and foreclosure the property ought to bring, at forced sale, 50 per cent of what it is worth. The weakness of such a theory, when applied to a large industrial corporation, is that the idea of liquidating a property for a sum anywhere near its value as a going concern is highly theoretical. Actually, about the only thing that can be accomplished in the case of default by a large company is to reorganize the company. It would be impossible to sell all the assets of one of our large industrial corporations and, therefore, the idea on which this rule is based falls considerably short of practicality. In the case of a smaller corporation, or a middle-sized corporation, where the property is not too large to eliminate the possibility of a purchaser, this rule would seem to have some degree of practicality.

It is possible that this rule has a more or less psychological importance. It seems to have grown out of people's experience in making loans that were local in character and limited in size. When it is applied to a wide variety of situations of considerably greater proportions, its chief value may be merely to give a feeling of reassurance. The investor, or the person making the loan, possibly feels safer when there is conformity to this limitation even though, as a practical matter, he may have very little recourse to the security it affords if he finds it necessary to satisfy his claims by liquidating it or selling it.

LIMITS IN RELATION TO NET WORKING CAPITAL

The second convention that is suggested is that funded debt be limited to an amount related to working capital. This relationship varies, dependent upon the nature of the issuer's business, but customarily should not exceed the amount of net working capital. According to this rule a corporation that has current assets of \$70,000,000 and current liabilities of \$20,000,000 should have funded debt not to exceed \$50,000,000.

The question arises as to whether there is any line of reasoning to support this limitation on bonded debt.

Owing to the nature of current assets as opposed to fixed assets, there is at least a possibility that the liquidation of these assets will be somewhat in line with their appraised value. Unless there was a terrific shrinkage, it might be possible to achieve values which would satisfy not merely the current creditors but the long-term creditors as well.

Actually, the weakness of this idea lies in the possibility that there will be a shrinkage arising out of the process of liquidation. A second weakness is that, even short of liquidation, asset values fluctuate. Therefore, in a period of downward price trends a shrinkage might occur which would destroy the values upon which this rule depends before liquidation is even considered. Thus, there is a more or less tacit assumption, where this rule is applied at the time of a financing, that the management will make every effort to maintain the balance sheet strength of the corporation at as high a level as it was at the time of the financing, and if any losses are sustained it would seem to be incumbent upon the management to set aside working capital until it regains this level.

As a rule, when this limitation is laid down as a condition of a financing, provisions are many times included in the bond issue for the purpose of enforcing it. For example, should the net working capital fall below the required level, a provision requiring that no dividends be paid until the required amount of working capital was restored might come into operation. Provision may also be made whereby the debtor company is prohibited from expanding its current liabilities to the extent that the current ratio is reduced below a specific point.

LIMIT IN RELATION TO CAPITAL STRUCTURE

The third convention is that bonded debt should not exceed $33\frac{1}{3}$ per cent of the capital structure. This rule is based on the idea that the stockholders' equity represents assets, over and above liabilities, which are available for the satisfaction of the bondholders. While there is a certain amount of merit to this idea, a critical analysis of the assets which support that equity is vitally important.

LIMIT IN RELATION TO EARNINGS

The fourth convention or rule is with respect to earnings coverage, and suggests that the earnings of an industrial corporation should be sufficient to cover interest charges, on the average, at least three times over. Possibly this rule is of more importance than the other three, since it takes into consideration the ability of the company to meet its fixed charges as a going concern, and therefore bears a closer relationship to reality than do the rules relating to liquidating value.

It is probable that under current conditions this rule of three times

coverage is not severe enough in view of prevailing low rates of interest. Let us assume a capital structure in which there is \$33 of bonded debt in every \$100 of capital structure, the balance being common stock and surplus. If a 3 per cent interest rate is assumed, the interest charges on each \$33 of bonded debt will be approximately \$1. If it is further assumed that the average earnings of this company over a period of years is 6 per cent, the interest charges would be covered six times. On the other hand, if interest rates of around 5 per cent prevailed, as they did in the early 1920's, the fixed charges would be \$1.65 and would have been earned approximately 3.6 times, which is much more in line with the convention. Therefore, one is justified in expecting better coverage than three times at present, and one might be inclined to expect a reasonably financed industrial corporation to show today a coverage of five or six times.

CURRENT TENDENCIES IN THE USE OF BONDS

While in the past industrial bond issues of the mortgage variety outnumbered debenture issues by a proportion of approximately 2 to 1, currently there has been a strong tendency toward a rather higher proportion of debenture issues. Perhaps this is a tendency which will continue over the long term, or perhaps it is merely a short-term manifestation. Obviously, when prevailing business conditions are good, or when there is optimism regarding the future, the same strict standards are not as likely to be applied as they are when the reverse is true. Certainly debenture financing is easier to accomplish at present than it was during depression years. On the other hand, it is possible that there is a definite movement toward a different point of view regarding the importance of mortgages generally.

With respect to the maturities of industrial bond issues, it may be said that currently the maturity is expected to run between 10 and 25 years, with the most common maturities usually between those two extremes. While in the past it has been somewhat uncommon to find serial bond issues in the industrial field, this is less true at present. There has been a tendency for industrial companies to take advantage of the low interest costs for the shorter maturities of serial issues in spite of the greater rigidity found in the serial arrangement as opposed to the sinking fund method of retirement. It is also true that, since the bonds of serial issues have definite maturities, they are somewhat easier to sell than sinking fund issues with indefinite maturities, and the cost to the issuer for the services of the investment banker is therefore less. The question as to whether the serial arrangement is preferable to the sinking fund depends

upon the costs involved, to a certain extent, but it also depends upon the outlook for the future. Should the outlook be somewhat uncertain, the greater elasticity obtainable from a sinking fund arrangement might offset the increased costs involved. There is also the possibility that bonds issued during periods of low interest rates may be purchased by the sinking fund at discounts during periods of higher interest rates at considerable advantage to the issuing corporation.

Generally, it may be said that the majority of industrial bond issues employ the sinking fund feature. Almost all industrial issues have a call feature with premiums running from 2 to 5 points, the tendency being for the premium to decrease as the bonds approach maturity.

LIMITATIONS ON THE USE OF PREFERRED STOCK

When the matter of setting up standards or conventions that may be applied to preferred stock issues is considered, the problem is even more difficult than it is with reference to bond issues. The fact that there are conventions or standards of any kind relating to bond issues is probably due to the fact that the institutional market is, and has been for many years, an extremely important part of the market for industrial bonds. However, since institutions are much less important as a market for preferred issues, common standards have not tended to develop. It is also true that, since preferred issues may be designed for a number of corporate purposes other than financing in the strict sense, standards are more difficult to apply.

However, in many instances it is desirable, and it is the intent of the issuer, to achieve an investment standing for preferred issues comparable to that of bonded debt. In such situations it is necessary to observe standards similar to those which have been described for industrial bond issues, applying those standards to the combined total of funded debt and preferred stock, or the total of fixed charges and preferred dividend requirements, as the case may be. Obviously, due to the contingent nature of preferred dividends and the permanent nature of the funds invested in preferred stock, a corporation may, with prudence, issue larger amounts of preferred stock than of bonds. A corporation will, however, ordinarily desire to maintain as strong a capital structure as possible, and will avoid, if possible, the necessity of passing its preferred dividends as a matter of good faith toward the investors as well as to avoid the claims arising out of an accumulation of unpaid dividends. It would seem desirable to limit preferred dividend requirements to such an extent that they could be met except in the most difficult circumstances.

LIMITATION ON PREFERRED STOCK WITH RESPECT TO ASSETS

One limitation on industrial preferred stock which gained some currency in the past is that such an issue should not exceed the value of the tangible assets less all debt. It is interesting to note that in the early part of the present century, when many consolidations and mergers were being consummated, it was not uncommon to set up preferred issues on this basis, the result being that the value of the common stock was based entirely upon good will and other intangible assets, as well as the earning power or leverage, derived from the preferred stock and the funded debt. In the years that have followed, most of the corporations which did this have retained earnings sufficiently so that an equity in tangible assets has been built up for the common stock and, where possible, the preferred stock has been retired. It is extremely doubtful that this limitation would be accepted as adequate today. The feeling is generally prevalent now that a preferred stock issue that is to be distributed to the public should be backed by a common stock equity of at least equal size.

LIMITATION WITH RESPECT TO EARNINGS

Generally speaking, the size of a preferred issue should be limited to the extent that the average earnings over a representative period of years will be equal to twice the sum of dividend requirements and fixed charges, if any, giving due consideration to the possible future trends with respect to the company's affairs.

It is interesting to note that, if the preferred issue does not exceed an amount equal to the common stock equity, this requirement of coverage twice over will usually be complied with. As a matter of fact, the coverage currently will be rather greater in terms of the low dividend rates on preferred stock obtaining today. For example, let us suppose a capital structure consisting of \$50 of preferred and \$50 of common in each \$100. Let us assume the dividend on the preferred to be 4 per cent and the return on the entire investment to be 6 per cent. In other words, for each \$6 earned the preferred dividend requirement will be \$2 and the preferred dividend will be earned three times. If the preferred stock dividend were as much as 5 per cent in the previous example, the earnings will still cover it 2.4 times.

SPECIAL TYPES OF PREFERRED

In so far as these limitations apply to the preferred stock of industrial companies, their observance is many times omitted in the issuance of preferred stocks with special features or privileges in connection therewith. The arrangements employed include participating preferred stock; preferred stock that is convertible into common stock; preferred stock

with common stock purchase warrants; and preferred stock sold as units, included in which are common stock shares that are considered to be a bonus. The purpose of these features is to provide the investor with the possibility of future profits beyond the stipulated return on the preferred in return for his acceptance of an issue which does not comply with the standards previously discussed. Generally speaking, among these various types of issues the convertible preferred is most frequently used by large industrial corporations. Convertible preferred stock is frequently used by new corporations and by corporations which desire ultimately to eliminate prior securities from their capital structures.

One of the problems in connection with convertible preferred stock concerns the extent to which conversion will dilute the book value of the common shares or the earnings per common share. Obviously, the analyst will find it necessary, in considering a company with convertible preferred shares outstanding, to determine the effect upon the value of the common shares in the event that the conversion privilege became so attractive that all, or substantially all, of the preferred should be converted. This is especially important where it is the avowed intent of the management that the preferred ultimately be converted into common in order to achieve a simplified capital structure consisting of only one class of stock. Preferred stock with a conversion feature is a device whereby it is possible to develop a future market for the common if the conversion feature is one that has, on the basis of analysis, a possible future value sufficient to make it worth converting. On the other hand, a corporation might offer a convertible preferred in which there was some doubt as to the future value of the conversion privilege since it depended upon development and expansion of earnings. In this case the feeling is that the corporation is giving the investor a reasonable amount in terms of priority and fair return, the conversion feature being a speculative feature, of possible but doubtful value, given in addition.

Sometimes preferred stock of this type is used where it is desired to sell an unusually large issue. In other words, instead of observing the limitations which have been suggested, the intent may be to sell preferred stock for as much as 80 or 90 per cent of the book equity in the belief that vigorous management will expand earning power and thus build up a solid common equity behind the preferred. The corporation, in that case, will give the preferred stock a more generous rate of return than it would for a smaller issue, and because the preferred stockholder apparently is taking considerable risk, a conversion feature may be included. That conversion feature may, however, provide that the preferred stockholders will receive less than a controlling interest, even though the whole issue

finally is converted, in spite of the fact that they put up more than 50 per cent of the capital based on book assets alone.

It might be interesting to note that, in the case of a young and vigorous management desirous of buying control in a company from an old family group, an arrangement of this sort might be quite logical in the event that they did not have sufficient cash to buy the common stock interest directly. Since the factor that will give the common stock its value is the continuance of the present management, it might be arranged for them to buy a very small common stock issue assuring control of the company, financing the balance of the deal with a convertible preferred stock issue. In this way the purchasers of the preferred receive priority as to dividends, and should the earnings develop sufficiently they might be entirely willing to convert into common stock once the ability of the management to develop the anticipated good will had been proved.

COMMON STOCK

The importance of common stock in the financing of industrial corporations is obvious. Many implications in this regard may be drawn from the foregoing discussions concerning bonds and preferred stocks as well as a previous discussion on the subject of financial statements and corporate reports. At this time, however, consideration shall be given to the background factors ordinarily taken into account in an analysis of industrial securities.

BACKGROUND FACTORS

Many nonstatistical or background factors will enter into the judgment of an analyst regarding industrial securities. In general, when these background factors are analyzed it is found that they are closely related to the so-called statistical factors, since they likewise have to do either with the stability or the profitability of the company under analysis.

TYPE OF PRODUCT

The first factor to be considered is the type of product that the company makes. Sometimes this factor is referred to as the *market problem*, or the *stability of industry factor*, since one is interested, in this connection, in the extent to which stability of demand for the product warrants a reliance upon expected future income.

In studying the type of product, it should be determined first whether it is a necessity or a luxury. In general, it is felt that investment is more certain when the product is a necessity. However, that point may be overstressed, since there are some items which all would agree are not entirely necessary but that come to be considered necessary in terms of our standard of living. For example, tobacco is ordinarily considered to be a comfort by economists, but owing to the fact that people have

become accustomed to its use, it becomes almost an essential item. Actually, throughout the business cycle the demand for tobacco is more constant than it is for some really essential items such as clothing.

Also, the factor of durability is important. In general, durable goods are conserved and made to last over a period of time, especially during recessions. Therefore, a greater fluctuation is expected in the volume of companies producing durable as opposed to nondurable items.

A third matter in connection with the type of product is the distinction between producers' goods items and consumers' goods items. Manufacturing machinery is an example of the former; clothing, food, and the like, the latter. It is generally assumed that companies in the consumer goods field are more stable than companies in the producers' goods field.

Finally, the unit price for the product is an important factor. In other words, one of the things that makes the volume of cigarettes sold more stable than that of clothing is the small unit price of cigarettes. An individual will in the case of necessity forego the suit of clothes, but will not tend to forego the apparently small item of cigarettes.

Therefore, the generalization that can be made in summary is that the most stable lines of business are those which produce consumers' goods of small unit price, that require frequent replacement and are necessities or quasi-necessities.

COMPETITION

The kind of competition a company faces is obviously of great importance. The fact has been mentioned that the industrial field, in general, is characterized by a high degree of competition. However, competition within the various industrial fields is present to a greater or lesser degree depending upon the organization within the industry. In some fields it is found that competition of an unhealthy cut-throat nature exists, with the result that few of the producing companies in such fields are able to show satisfactory returns during the periods in which such competition is most violent. For example, the needle trades industry is comprised of a very great number of small and large producers, in which competition is of this nature. On the other hand, there are industries dominated by a few large units, such as the agricultural machinery industry, where there is healthy competition of a sort that does not threaten the existence of the established companies within the industry nor cause violent fluctuations in earnings—although fluctuations may be caused by other economic factors.

FACTORS PROTECTING PROFIT MARGINS

A third item in this category would include any factor which might provide special protection to profit margins, three of which shall be

suggested here; namely, patents, trade-marks and good will, and special managerial skills.

A *patent* is a legal grant of monopoly to the inventor of a new device for a period of 17 years. The purpose of patents is to encourage effort in the direction of producing new devices useful to the community. They may be granted to an individual inventor who may use them as the basis for a new business, or they may be granted to large established corporations as the result of complicated and expensive research and experimentation by means of which they improve their position in the industry and achieve the enhanced profits of industrial leadership. Sometimes these patents are basic and constitute great and important improvements; sometimes they cover minor improvements which nevertheless may provide a very decided advantage to the owner.

While advantages based on patents may be lost to some degree with the expiration of the patents, the holder of a patent does have a substantial period in which to establish leadership. Very often a business establishes itself so thoroughly during that period of development that it continues to enjoy a preferred position by virtue of the trade connections that have been established, the good will that has been developed, and the know-how that has been gained. The value of the patents and the possibilities of extending the advantages of one's position after expiration vary with the type of product. If the product is a consumer goods item sold to the final consumer, the good will developed is usually considerable and will enable the company to continue to enjoy an advantageous position. On the other hand, there are mechanical devices sold to manufacturers and others who are very likely to shift elsewhere, if, after the patents expire, they can obtain such devices elsewhere on a more satisfactory basis, since buyers with engineering skill are less likely to buy on the basis of trade names. Frequently, however, firms are able to establish a reputation for prompt delivery, superior service, or superior products, in which case buyers are willing to pay a premium to buy from those firms even though they are very skillful purchasers and know the market thoroughly. Thus, patent protection may be a temporary protection, or it may be the basis for something which will develop into a trade name and good will of substantial value. Patents may also be kept alive by research which develops additional patents, thus enabling the concern to maintain leadership in its particular field.

Good will is present to some extent in all business, and while it may be recognized as being present, it is difficult to measure. In the final analysis, it may be said that good will is represented by the amount for which a business can be sold in excess of its tangible assets. This may be stated in another way by saying that if the earnings of a business provide more

than an ordinary return on the investment in tangible assets, the capitalization of those excess earnings is the value of good will.

Let us suppose that a business had \$500,000 invested in tangible assets and was earning at the rate of \$100,000 per year, or at the rate of 20 per cent. Since, obviously, the earnings of the business demonstrate the fact that the business is worth more than the value of the tangible assets, \$500,000, the problem is to determine what a normal rate of return would be. If we determined that the normal return for this particular kind of business was 10 per cent, and if we felt that the earning power of the business was more or less stable, we could say that the business was really worth \$1,000,000 and that the good will was as valuable as the tangible assets.

It is interesting to note that very often good will of this sort is found in businesses that have established their trade names by advertising and careful marketing. Typically, they may well be concerns that show a substantial sales volume. However, volume alone does not indicate the presence of this item.

The third item, *managerial skills*, has been mentioned separately as a matter of emphasis rather than as something separate and distinct from the factors under discussion. As a matter of fact, a great many things might be included in managerial skills, and certainly good will is more often than not the result of special skills of some sort on the part of management. It might be that it is the manufacturing department, the merchandising or sales division, or the research department in which these skills are found. Wherever they may be found, they contribute to the special success of a business and enable it in many cases to earn a rate of return that is superior for the particular line of business. Generally, therefore, in analyzing a company, it is advantageous to determine if possible what particular skills its management possesses and applies in order to explain its success, since, if one understands the source of its success, one can better judge the likelihood of its future continuance.

LABOR RELATIONS

Merely to mention the factor of labor relations should be sufficient to bring a realization of the importance involved for all industrial corporations. A concern that can establish friendly and cooperative relationships with its labor force has a very decided advantage under present conditions. Obviously, one of the things that gives rise to concern among some farsighted investors in the automobile industry is the question of the extent to which strong and combatant unions may squeeze the profits of what has been in the past a very profitable industry. The problem of

the automobile industry is typical of many others, although some industries have fared better over the long run in this regard.

RAW MATERIALS

The source of an industry's raw materials is an important factor that must be considered in judging the prospects for an industry or the businesses within that industry. For example, the rubber companies are dependent upon foreign sources for the crude rubber necessary to their production. For a protracted period the rubber companies were subjected to violent fluctuations in the price of crude rubber which were beyond their control and resulted in wide variations in their profits. In the case of the steel industry, a company such as the United States Steel Corporation, which produces its own material, is free of problems in this regard. The chemical industry is another which has few problems as far as materials are concerned.

TARIFFS

In some industrial fields tariffs are important. For example, in the field of beet sugar production and refining, the tariff is a very important factor and must be analyzed in its relation to the operation of the business. It might be suggested that many analysts are inclined to look with doubt upon a concern that depends for its profits on a protective tariff in a period when there is as much argument as there is at present in favor of freer international trade. In spite of this attitude, which is held in some quarters, there is possible justification for skepticism in regard to the possibility of any radical changes in this country's tariff policies in the near future. However, since such a possibility does exist, it might be prudent to prefer, as an investor, businesses, such as the automobile manufacturing business, that are strong enough not to need protection as evidenced by the fact that they can sell abroad in competition with foreign producers, not because this country has low-wage scales, but because it has achieved great economies by large-scale mass production techniques. Likewise, the automobile industry in this country is to a very great degree impregnable against foreign competition in the domestic market.

VALUATION AND PRICE OF INDUSTRIAL SECURITIES

In a discussion of some of the problems of valuation and price for industrial securities, it will be appropriate to indicate that the material covered will have general utility for other types of corporate securities as well. The matter of yield on bonds and stocks has already been discussed in a preceding section. The problem here is to determine what the yield

should be on a new security that has never been in the hands of the public.

BONDS AND PREFERRED STOCK

The yield for a new issue of bonds or preferred stock is determined on the basis of a comparison of the issue with existing issues of a similar nature. The procedure is to study comparable issues already on the market and to find one or more that are as nearly similar as possible to the one to be distributed and then to compute the price and coupon so that the investor will receive a net yield at least as attractive.

When dealing with securities that are relatively easy to compare—note that utility securities are much more standardized than industrial securities—the price at which the new issue should be sold frequently can be very closely determined. In connection with industrial securities, lack of standardization makes this process somewhat more difficult, but the same general approach is used, nevertheless.

In determining the price of a bond or a preferred stock, one starts, not with the price, but with the yield, and determines the yield that can be obtained on similar issues. In the case of a bond, the coupon rate and the price are then adjusted in relation to the maturity in order to produce the desired net yield. Of course, in the case of a preferred stock, it is only necessary to adjust the dividend rate and the price, since there is no maturity factor.

Obviously, in the matter of making comparisons for this purpose, caution should be exercised. Issues are frequently found, which show an unusually high yield on the basis of market price, that are unsuitable for purposes of comparison. Upon examination it will be found that this apparently abnormal yield is frequently due to the fact that the call price of the issue is holding down the market price. In other words, in the event that there is a possibility that a company might be able to refund an issue of bonds advantageously, or replace a callable preferred at lower rates, the market price will tend to reflect this possibility by declining toward the level of the call price, the resultant yield becoming apparently high in relation to securities of comparable investment standing. One of the most common mistakes made by the beginner is to forget this factor of call price and to make comparisons on the basis of callable issues which at that particular time do not reflect normal market prices for issues that are not affected by the call feature.

THE ELEMENT OF RISK

It is customary for those who study the subject to say that the net yield should reflect or equal the riskless interest rate, which is sometimes

called the *pure interest rate* by economists, *plus* a premium for risk. If, then, securities can be found that apparently have a negligible element of risk, those securities ought to give a yield approximating the pure interest rate. At the present time it might be said that the pure interest rate is approximately the rate of return on the obligations of the United States government. This does not mean that those obligations are riskless, but merely that the risk involved is regarded as negligible.

Using the pure interest rate as a basis, when a higher yield on other bonds is found this differential is attributed to the element of risk involved. If it is found that the yield on long-term governments is 2.50 per cent, and the yield on a long-term corporate obligation is 2.65 per cent, the indication is that the investor is receiving a very small premium of .15 per cent per year, over and above the pure interest rate, to compensate him for the risk.

In view of the fact that many of the highest grade corporate obligations are selling on a yield basis only infinitesimally higher than government bonds, the question has arisen as to whether or not it might be possible to find corporate obligations selling at a lower yield than the issues of the federal government. Since this concerns conceptions that reside in the minds of investors who are quite capable of irrational actions, it is necessary to be very careful in making any predictions; however, it does seem illogical that investors will ever be willing to pay for the privilege of investing in a corporate instead of a federal obligation, which is what they would be doing in accepting a lower yield on corporate obligations than on governments.

It is an interesting generalization that in periods of prosperity and good times the premiums for risk tend to shrink and become very small. In other words, if one were to note the yield on a semi-speculative bond today, one would find a very small differential between it and the return on a government obligation of similar maturity. If one were to note the yield on the same bond during a period of business uncertainty and depression, one would find an appreciably larger differential. If the trend in yields on the various classes of bonds over a substantial period of years is examined, this phenomenon will be clearly seen, and it will be noted that the yields for the different classes and grades of bonds based on quality come together in periods of high optimism such as is found at present, but tend to spread considerably during periods of recession and depression. Risk is something that can vary and will tend to vary with the times. In good times people will minimize hazards. In bad times they tend to exaggerate the risks.

At this point it is important to note, in passing, that the pure interest rate is in no sense fixed or static. It will tend to vary in response to the

broad forces of supply and demand for capital as modified by the monetary and debt management policy of the government.

In referring to the pure interest rate, reference is made to the pure cost of borrowing. The differential over and above this rate represents a cost to the corporation for borrowing; but it is something more than that. It is a premium or an insurance factor for the investor. It is something to compensate the investor for the losses it is presumed will occur due to the risk involved. Theoretically, it should be set aside for this purpose.

Actually, everyone hopes that he will purchase securities skillfully enough to receive a premium for the risk involved without suffering the losses relevant to that risk. In some cases this objective is achieved. In other cases it is possible that the losses will exceed the premium, especially in the cases of investors who purchase low-grade securities in periods of optimism and receive a relatively low premium for the risk they are assuming.

VALUING COMMON STOCKS

In valuing common stocks one should not fall into the error of considering any one factor to be all-important, but, as between earnings and dividends, earnings are usually considered to weigh more heavily in determining the price. However, dividends are important, and in some fields where investors lay great emphasis on dividends, a very small change in dividend rate will cause a change in price even though earnings have not changed.

If a stock is valued on the basis of earnings, the question arises as to how to work from earnings to value or price. This is done by capitalizing the earnings. The process is one of simple division, and the formula is *earnings divided by capitalization rate equals value*. Thus, if a corporation has earnings of \$8 per share and it is felt that the proper rate of capitalization is 10 per cent, \$8 is divided by .10, giving a valuation of \$80 per share. Ideally of course, it is the future earnings which should be capitalized, and while this is manifestly difficult the current trends may be taken into consideration. Very frequently, the most recent earnings are those which are capitalized by the market. On the other hand, average earnings are often used for this purpose—that is, an average of earnings over a period long enough to be representative of varying business conditions, including depression years as well as good years.

The relative importance of these standards will vary with the particular company involved and the existing stage of its development. In the case of a corporation that is growing rapidly and putting a large part of its earnings back into the business, an improvement in future earnings would be expected. In this case a capitalization of average earnings

would be less appropriate than the capitalization of the earnings for the most recent year. For a more mature corporation whose earnings are more likely to be characterized by stability than growth or expansion, it would seem preferable to take an average of earnings as a basis for capitalization.

Frequently the capitalization of earnings is expressed as a multiple rather than as a percentage. In other words in the case of an \$80 stock with earnings of \$8 per share—earnings capitalized at 10 per cent—it might be said that the rate of capitalization was 10 times the earnings. In the case of earnings capitalized at the rate of 8 per cent, the multiple would be 12.5 times. This may also be referred to as the *price-earnings ratio*.

FACTORS DETERMINING RATE OF CAPITALIZATION

Many people interested in industrial common stocks say that such stocks, as a rule of thumb, are worth, on the average, 10 times earnings. However, currently, the better stocks typically sell at higher multiples, it being not uncommon to find stocks that are highly regarded selling at 16 to 20 times earnings. Stocks may also be found that are selling on a much lower times-earnings basis. It is important, therefore, to remember that one cannot make a valid generalization as to what rate of capitalization should be applied to the common stocks of industrial companies. Let us consider, then, some of the factors that make it logical to have varying rates of capitalization, varying multiples, or price-earnings ratios.

The price-earnings ratios of industrial common stocks will vary among the types of industries. For example, one would expect coal stocks to sell at a low price-earnings ratio, since they are relatively unpopular at the present time and investors will not pay high prices for a given amount of earnings. On the other hand, one would expect rather high price-earnings ratios as applied to the stocks of companies in the chemical industry.

Another factor affecting price-earnings ratios is capital structure. In general, companies with funded debt and preferred stocks included in the capital structure currently will sell on a higher price-earnings basis (lower rate of capitalization), owing to the leverage provided, than will the stocks of companies with capital structures consisting only of common stock. At other times and under other conditions, however, one might expect a higher return on such an investment to compensate for the risk of a large funded debt; therefore, such stocks should then sell at a rather low price-earnings ratio.

A third factor affecting the rate at which earnings are capitalized is the

business cycle and the reactions of investors to the fluctuations of that cycle. When the business cycle is in an ascending phase, public optimism results in high multiples and low rates of capitalization. When the business cycle is in a descending phase, dropping off into full depression, public pessimism results in low multiples and high rates of capitalization. Naturally, there is an element of relativity that must be taken into consideration. In other words a company might earn as much as \$5 per share in a boom period and as little as \$0.25 per share during a depression period. If the stock sold on a basis of 10 times the earnings in the good year, or \$50, one would not expect the price-earnings ratio to be as low in the poor year, since the resulting price would be only \$2.50. Thus, when earnings get so low that they are only nominal, multiples cease to have much significance; and when they get down to deficit figures, they have none.

A fourth factor affecting the rate of capitalization is the trend of earnings. If there is an upward trend, high price-earnings ratios usually result. If the trend is downward, lower price-earnings ratios usually result. Of course, the trend of earnings may be a manifestation of an industrial growth that is independent of the business cycle. In the case of companies with great growth possibilities, one naturally looks for a compounding of the earning power and therefore is willing to pay a higher price-earnings ratio for its stock.

OUTLINE FOR ANALYSIS OF AN INDUSTRIAL CORPORATION'S SECURITIES

The form followed in preparing investment reports will vary in detail in accordance with the ideas of the individual investment banking house. Likewise, the form will vary in accordance with the use to which the report will be put. Basically, however, the main body of information to be brought together, the factors to be subjected to analysis, are similar in almost all cases. The following form of report is suggested as a pattern which may be modified to conform to individual requirements.

A fairly complete investment report on an industrial corporation's securities may be logically broken down into four main sections and may be assembled in the following order:

1. The body of the report.
2. Financial statements.
3. Illustrative charts.
4. Sources of information.

The body of the report should consist of an interpretation of the company and its securities written in a pointed, interest-provoking fashion. This section may open with discussion of the history of the company and

the nature of its business in summary form, giving consideration only to the leading factors involved. This may be followed by a discussion of the company's capital structure; the working capital position; the earnings, giving consideration to their average, range, trend, and stability per share by years. The various securities of the company may then be treated individually, bringing out the chief provisions of each, the relation of each to earnings, and the prices and yields of each issue. In addition, this section should include a comparison of the company with other similar companies in the more important aspects; a discussion of factors peculiarly important to the industry, and their effect on the company; and a discussion, if possible, of the company's management. This section should close with a summary investment recommendation.

The remaining sections of the report consist of supporting data on which the conclusions stated in the body of the report are based. The financial statements should include both comparative balance sheets and earnings statements for the past five to ten years.

It will be found that most houses follow a standard form of their own for setting up financial statements. Work may be simplified by stating only thousands of dollars. At the bottom of the balance sheets the following information should be shown, using any useful ratios in the body of the report:

1. Net working capital.
2. Contingent liabilities.
3. Valuation reserves deducted from receivables, plant, and so forth.
4. Ratios:
 - a. Cash, marketable securities and receivables to current liabilities.
 - b. Current assets to current liabilities.
 - c. Working capital to funded debt.
 - d. Tangible assets to total debt.
 - e. Net tangible assets per share of preferred.
 - f. Net tangible assets per share of common.
 - g. Book value per share of common.

In setting up the foregoing statements, if reserves are valuation reserves, they should be subtracted from the proper asset. If they are liability or surplus reserves they should be classified accordingly.

Earnings statements should include annual figures for a period long enough to cover both prosperous and depression years. They should be rearranged as necessary to bring out:

1. Net available before depreciation and interest.

2. Net available for interest and dividends after depreciation.
3. Bond interest.
4. Federal income tax.
5. Other deductions.
6. Net available for dividends:
 - a. Preferred dividends.
 - b. Common dividends.
7. Surplus over dividends.

In connection with the earnings statements, the following information should be stated:

1. Times interest earned:
 - a. Before depreciation.
 - b. After depreciation.
2. Times interest and preferred dividends earned.
3. Earned per share of common.
4. Paid per share of common.

It should be noted that it is often best, where stock split-ups or stock dividends have occurred, to reduce the figures to a basis of one share of present outstanding stock in order to make earlier per-share figures comparable with current data.

The data on prices and yields should include the annual high and low prices as well as the current market price of the various securities. Yields should be computed for both high and low prices as well as for the current price. For common stock, the rate earned on current market price should be determined, using both current earnings and average earnings and noting in the body of the report the significance of the earnings as well as the dividends in their relation to price.

For purposes of graphic presentation of data, the following suggested charts may be used:

1. One hundred per cent bar charts for two balance sheets. Vertical bars should be constructed to show percentages in groups of items such as working capital, fixed operating assets, fixed nonoperating assets as against bonds, preferred stock, common stock, and surplus.
2. Earnings and their disposition may be presented either by line or bar chart showing earnings, interest charges, preferred and common dividends, and surplus by years.
3. Yields of bonds and preferred stocks. These yields may be compared with the return in same years for securities of comparable grade.

4. For common stock, the price range, earnings, and dividends per share may be shown. In the case of stock dividends or split-ups, past figures should be reduced to a basis equivalent to one share of stock now outstanding.

Other significant information which may be presented graphically will suggest itself in each individual case.

REVIEW QUESTIONS

1. What types of businesses are included under the broad classification "industrials"?

2. What are the characteristics of an "industrial" that distinguish it from a "public utility"?

3. What are the principal sources of industrial financing?

4. What big advantage does bond financing enjoy over preferred stock with respect to federal taxation?

5. What advantages may accrue to a corporation by substituting a preferred stock issue for a bond issue?

6. What advantages may accrue to a corporation by substituting common stock in lieu of bonds?

7. Illustrate the importance to existing stockholders of the offering price of common stock to be issued to raise a specific sum of money.

8. What conventional limitations exist on the amount of funded debt that an industrial may incur in relation to:

- (a) Fixed assets?
- (b) Net working capital?
- (c) Capital structure?
- (d) Earnings?

9. What conventional limitations exist on the amount of preferred stock that an industrial may issue in relation to:

- (a) Fixed assets?
- (b) Capital structure?
- (c) Earnings?

10. What features may be included in preferred stock provisions to permit the preferred stockholders to participate in future corporate earnings? Under what conditions are each of these features included in the preferred stock provisions?

11. In judging the stability or profitability of a company, what important factors are considered in reviewing:

- (a) Type of product?
- (b) Competition?
- (c) Factors protecting profit margins?
- (d) Labor relations?
- (e) Raw materials?
- (f) Tariffs?

12. What factors are considered in establishing the yield for a new issue of bonds or preferred stocks?

13. Which factor is more important in establishing the value of a new issue of common stock, dividends or earnings?

14. What are the factors that determine the rate of capitalization in valuing an issue of common stock?

15. In preparing a complete investment report on an industrial corporation's securities, what information would normally be included in each of the following sections:

- (a) Body of the report?
- (b) Financial statements?
- (c) Illustrative charts?
- (d) Sources of information?

CORPORATE SECURITIES AND BUSINESS CYCLES

by John F. Fennelly of Glore, Forgan & Company

IN THE SPRING of 1929, when I decided to leave the academic profession and try to become an investment banker, I was fortunate enough to get an introduction to my present senior partner, Mr. Charles Glore. I was taken to luncheon in Chicago by Mr. Glore once while I was passing through the city, and I am sure that during the meal I held forth in my most pontifical and professional manner.

Mr Glore listened very politely, but when we got up at the end of the luncheon, he said, "I am delighted to have met you, Mr. Fennelly, but I want you to know that there is a lot you don't know about the bond business."

About six years went by, during which I had sneaked down to New York and obtained a job in the New York office of Field, Glore & Company without Mr. Glore's knowledge, and by 1935 I had become a partner. Shortly thereafter we had a partners' dinner, which I thought would be an appropriate occasion to remind Mr. Glore of our first meeting. He listened attentively and then when I had finished he remarked, "What I said at that time still holds. There still is a lot you don't know about the bond business."

I have been afraid to call the matter to his attention since then, because of the likelihood that he would say the same thing again. However, we all must start out somehow in this business, and what I am trying to do now is to think of some of the things that were in my mind during the early years of my experience in the bond business, the answers to which nobody explained to me but which I just had to absorb through the skin rather than through the ear. Those things don't have to do with earnings ratios or balance sheet ratios or income analysis, which anyone can learn, but they have to do with certain general principles in accordance with which you judge values in industrial securities. In fact, I think they would apply to all corporate securities, but they are particularly important in connection with industrial securities.

FUTURE EARNINGS

The first and most important basic factor is that in the purchase of all investment securities we are making a bet on the adequacy of future income to pay interest and dividends, and to repay principal, if it happens to be a loan.

Now I want to stop and emphasize that point a bit, and I think one of the best ways to bring out clearly what I mean is to explain the fundamental difference between a typical commercial bank loan and a typical investment credit. That difference is just this: In a typical commercial bank loan, the funds with which to pay the loan come from the liquidation of the goods on which the loan is made.

In other words, if you are financing a shipment of wheat to Europe, or if you are financing the processing of cotton from raw cotton to manufactured textiles, or if you are financing the aging of liquor in a warehouse, in all cases you are financing goods which are already in existence. In the normal course of events those goods will acquire, by transportation or by processing, greater value as the time period goes on, and the liquidation or the actual sale of those goods—whether or not a profit is made—should provide the means with which to repay the bank loan.

The essential difference between that and a capital loan is that the means with which to repay a capital loan can only come from the net income produced as a result of the capital equipment or machinery that has been purchased with this loan. There is no liquidation of the collateral itself; it is the net income. The physical asset itself during the period of the loan is a wasting asset rather than an asset that is normally enhancing in value. Therefore, by the very nature of the difference between the two, the risk is obviously much greater in the case of a capital loan.

In the case of a capital loan you have an asset that is going downhill while the loan is in existence, as compared with the assets behind a commercial bank loan which should be and normally are going uphill in value, and that difference in itself gives the former a greater risk factor.

The second fact is that you will never have the funds with which to repay the capital loan unless the company that buys the machinery makes a net profit on its business from the use of that machinery. It is quite important to bear this distinction in mind, because it focuses the problem sharply on the future rather than on the past. Past performance is important solely as a clue to what we may expect in the future, and asset values are important only in so far as they are capable of producing future net income, not gross income. There can be nothing more useless than a wonderful past-earnings record if one purchases a security just when the basic trend is changing for the worse, and nothing is more

difficult to sell, to turn into cash, than physical assets which are no longer capable of producing a net income.

Now, of course, you must look at past earnings. Everybody in the business starts from that point of departure, because it is one of the most important clues you have as to the future. You start with the trend of past earnings, and if the trend is rising, you are hopeful, at least, that it will continue into the future. It is a good omen that you may have good earnings in the future, but there is no certainty about it. The important thing that you must always do is to make a projection of those earnings into the future, and your ability to make an accurate projection will determine very largely whether or not you are a good buyer of industrial securities. While this may sound simple and trite, I cannot emphasize it enough.

THE LIFE CYCLE OF INDUSTRIES

The second basic factor is that *all industries tend to have a definite life cycle, or at least a life cycle expectancy*. In other words, industries develop in their youth, arrive at maturity, and then grow old and impotent, just like human beings. In each generation we witness the rise of new industries and the decay of others.

The best time to buy any industrial security is obviously during its period of vigorous growth. To use a familiar phrase, "The best time to shoot birds is when they are on the rise."

Shakespeare expressed the same idea more poetically when he wrote:

There is a tide in the affairs of men
Which, taken at the flood, leads on to fortune;
Omitted, all the voyage of their life
Is bound in shallows and in miseries.
On such a full sea are we now afloat;
And we must take the current when it serves,
Or lose our ventures.

The idea is simple to express, but vastly more difficult to apply with success. The difficulty is the old familiar one that foresight is always much harder than hindsight. In 1940 it was easy to see that General Motors common stock would have been a wonderful purchase in 1912, but in 1912 it would have taken a lot of courage and vision to make the purchase.

In order to illustrate what I mean, I have made a very crude chart of what I would call a typical life cycle of an industry. By no means do all industries go through this pattern, but I think it is one which is familiar enough, and I think you will recognize it when I apply it to definite industries with which you have some familiarity.

First of all, you have a new invention, let us say such as the automobile, and it becomes popular and well known and people want to buy it. Then you have the springing up of a lot of little companies building automobiles, so the automobile industry expands very rapidly with a lot of companies in the picture. This phase of the life cycle is shown on the chart by the numeral I. Then it reaches a point of prosperity where a lot of little companies are making money, and all of a sudden there comes a crash in that industry. It may very probably coincide with a major depression, but for the first time that infant industry finds that it is producing more units than the demand will take.

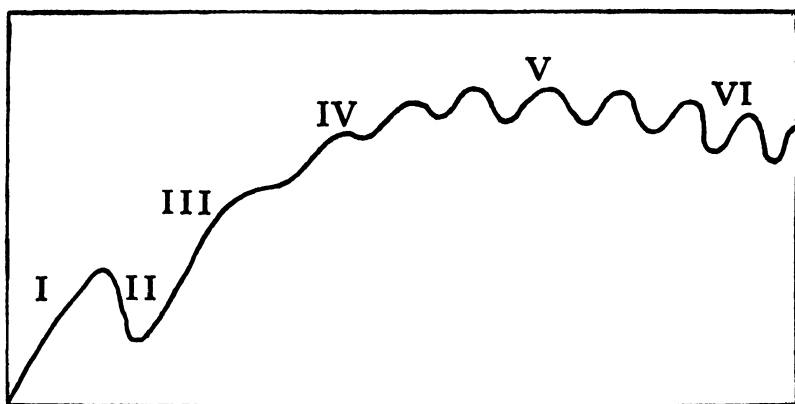


CHART 1. Theoretical pattern of an industrial life cycle.

At this point there is a very drastic weeding out of these new companies and many of them drop by the wayside, as represented on the chart by the numeral II. In the case of the automobile industry, I think about 99 per cent of the original companies went by the board, and they all went pretty fast during the period between 1907 and 1915.

Then the industry gets down again to a kind of rock bottom with a persistent growing demand. There are now only a small number of companies in the business. The industry goes forward again with a strong growth and those companies expand.

This is the third phase of its life as indicated on the chart and may last for a period of ten to fifteen years. The demand during this period is so strong that the business moves forward independently of the fluctuations of the business cycle. For instance, in the depression of 1929 to 1933 the demand for electrical appliances, refrigerators, and a few items of that kind, was so great that the industry kept on making money during all that period.

Point IV on the chart is the point at which for the first time the in-

dustry begins to feel the tidelike pull of the business cycle. In this phase, total volume does not actually fall off in depressions, but the curve flattens out and you can see a definite downward trend in the particular business when a change in the general business trend takes place. However, the industry continues to go ahead vigorously, expands strongly until the next business recession, and then flattens out a little more.

Point V on the chart indicates the phase of full maturity. When an industry has reached the maturity of the steel industry, for example, it will only grow with the secular trend, with the growth of the nation as a whole. Steel is a basic material, and if times are good the steel industry will expand, but its expansion will be almost directly proportional to the rise in general business. On the whole, it will describe a pattern of flow and ebb almost identical with that of the business cycle.

Point VI on the chart is supposed to represent a stage in the industry when it has passed full maturity, when there are other new products coming in to compete with it and actually it is not holding its own. In other words, it is an industry on the down trend. I would say, in spite of their present prosperity, that the railroads of this country have probably reached such a stage. They will go up in periods of prosperity but probably on the down swing they will go down more than they have gone up.

That may be a rash prediction, but certainly the cotton textile industry has reached such a stage. Right now there is a terrific demand for all kinds of cotton goods, but we have rayon and nylon coming along and other synthetic products, and it seems to me almost inevitable that the cotton textile industry will be a declining industry during the next generation. Even though it may be a fairly stable industry, the industry is not likely to show any real growth factor. There will be a big demand for cotton and other materials for a while because we have not been able to get them, but this will change and the cotton industry will probably go down during recessions more than it will go up on the up swings.

BUYING IN RELATION TO THE LIFE CYCLE

Now let us come back and take a look at the chart from the standpoint of the investor going into a new industry. Would you wish to buy securities, or be the bankers for securities, during phase I of the life cycle?

The answer is that this would be a highly dubious venture, because it is almost impossible to tell at this particular point what companies are going to emerge successfully from the great shuffle and battle that is certain to take place during phase II.

Probably in 1907 an automobile company that you would have been most likely to buy would have been the Pierce Arrow Company, which went into receivership later in the 1930's and has finally disappeared

entirely. Another outstanding car was the Peerless. It did not go into bankruptcy, but it finally faded from the picture. There were just too many competitors in this industry, and the industry had not taken on sufficient form as to leadership to make it clear whether you were making a good bet or a bad one.

An individual may be willing to make that kind of a bet with his own money, because if he happens to hit the jackpot it will be an enormous jackpot; but he should know the risk he is taking. As far as a public security issue is concerned, however, which you as an investment banker must be responsible for as long as it is outstanding, I would say that would be a very bad period to select because you could not make the bet with any degree of certainty.

We come now to the second phase, during which a large number of the companies in the industry are eliminated by bankruptcy, merger, and other causes. The termination of this second phase should be the ideal time to make a long-term commitment on any kind of industrial security. The weaker members have been shaken out; the industry has taken form. There are a few leaders. They are usually financially strong and sufficiently ahead of the rest of the pack so that it is reasonably safe to bet on them if you believe the industry itself has a vital and vigorous growth ahead.

You have at this point two basic factors in your favor: the growth factor and the ability to pick the company on which you want to bet. Perhaps you could not have picked General Motors in 1912, but certainly you could have picked General Motors in 1921 or 1922 for a long-term swing, and you could have seen that company emerge as the dynamic leader of a very vital industry.

You should be able, therefore, to buy a stock during the third phase of an industry's life with confidence that it does not make much difference at which point in the general business cycle you make the purchase. As the industry becomes more mature, however, the factor of the business cycle becomes progressively more important in the timing of a security purchase. During phase IV or V, you can see that if you issue a stock at the peak of a general business cycle, your investing public is going to have an unpleasant period during which they are likely to have a loss in their purchase, and they may have a considerable period of waiting before the stock returns to its original issue price.

I have used the automobile industry as an illustration. Certainly the automobile industry appears to be in for a great period of prosperity during the next several years. It is a little bit difficult to know now whether the automobile industry is in phase IV or V of its life cycle. It certainly does not look to me as though it had reached phase VI. On

the other hand, it certainly is no longer in phase III, because it will be sensitive to a decline in the business cycle after the immediate urgent postwar demand has been satisfied.

The air lines, however, appear to be fairly definitely in phase III. They have gone through their early period of development and rapid growth, and the second phase of shaking down. They have settled down into a fairly well established industry, with a number of outstandingly strong companies, most of which will continue in the business and benefit from a continued vigorous growth in the volume of passenger and freight traffic.

By that, I do not mean that you should rush out and buy air-line stocks. In the first place, if you look at air-line stocks you will find that most of them are selling at the present time at very high price-earnings ratios. However, they are selling at such high price-earnings ratios because most investors believe that they have many years of vigorous growth ahead and that you can afford to discount those future earnings at a very high rate in relation to their current earnings.

One may be fooled, but that is the basic factor that you have to take into account in this mysterious problem of what is a fair price-earnings ratio. Certainly, if you are convinced that the air-line companies are in for a long period of expansion, you can afford to pay a much higher price in relation to current earnings for these stocks than you can afford to pay for a textile stock or for a steel stock, the prices of which will fluctuate very closely with the swing of the business cycle.

Price-earnings ratios of companies in the third and fourth phases will be high. They should become progressively lower as they move farther through their life cycle.

An important complication in the cyclical pattern outlined above is the fact that the members of a given industry do not always remain in the same competitive position relative to one another. Thus, as a result of unusually able management, a company may demonstrate a vigorous growth during a relatively late phase in the development of the industry as a whole. Outstanding examples of this phenomenon in recent years have been witnessed in the cases of Chrysler in the automobile industry and National Steel in the steel industry. Such examples, however, should be regarded as exceptions to the general rule.

INDUSTRIAL MATURITY

A very interesting change takes place in the character of the assets of a corporation as it grows more mature. In the early stages of its development, when its earnings are growing rapidly, its market value will be high in relation to its book value. Its book value will be low and the manage-

ment will probably be struggling to expand, putting all available cash into plant, new equipment, and so forth. The company is likely to incur a lot of debt for that expansion, and will depend on future earnings to bail it out.

As the company grows more mature it is likely to develop more and more liquid assets in relation to its total plant value and, if the management is smart, it will be retiring debt and getting more and more into a pure equity position so that it will not be caught in the squeeze when conditions get bad.

One of the most interesting examples I know today of a company that has reached maturity, that has gone through a cycle of vigorous growth and become more and more liquid, with its book value rising in relation to its market value, is the Pullman Company. I do not think anybody would expect the Pullman Company to show a very vigorous growth from here on. Undoubtedly, this company has a very essential place in our national economy. Nevertheless, its earnings will probably fluctuate closely with those of the railroads and with the business cycle.

If you examine the balance sheet of the Pullman Company you will find a large amount of cash. Its property is written down to a very low depreciated value. In fact, it owns a lot of cars that are carried on the books for nothing at all which still have a good deal of value. The company is in a position, therefore, to pay out practically all of its earnings in dividends, and the stock tends to sell today on the basis of its dividend yield rather than on prospective earnings.

On the other hand, I should like to cite the railroads as an example of an industry that did an extraordinary bad job in getting itself ready for maturity, forgetting that there was such a thing as maturity. During the period of their most vigorous growth, the railroads rarely set aside reserves for depreciation. They were convinced that, if they maintained their properties fully, they did not need to worry about this intangible thing called depreciation, and also they did not make much effort to retire their debts.

That attitude was partly the result of being a controlled public utility and being limited to a fixed rate of return. As you know, if you are limited on your over-all rate of return, you can make more money on common stock with a capital structure that includes a lot of senior securities. Nevertheless, the railroad managements had an idea that they were a permanent fixture in our national economy, and, therefore, that depreciation was an irrelevant matter. When they finally realized in the 1930's that they had reached the stage of full maturity, most of them were wrecked by this earlier policy. I think that even railroad executives will admit today that there is such a thing as obsolescence. No matter how

secure you are, or how monopolistic your position may be in industry, a time comes when new inventions will bring about new methods. At that time you will have competition and, in order to provide for this event, you need to set aside reserves in good times to make provision for the factor of obsolescence.

With reference to reserves, one of the funniest experiences I ever had was in connection with a Cuban sugar company of which I have been a director for the last ten years. I was at the sugar plantation in the early 1930's and, while I was there, a sugar planter from Java came for a visit. We were discussing the boom that took place in 1918 and 1919 when the price of sugar rose to more than 20c per pound and then dropped to 2c per pound in less than a year's time. They used to call it the "dance of the millions" in Cuba, and it played the devil with every sugar producer on the island.

While we were talking, the Javanese planter remarked, "We didn't get wiped out then. We were more fortunate, because in the good years we set aside substantial reserves that tided us over the depression."

At this point, one of the minor officials of our Cuban company spoke up and said, "It is a darn good thing we didn't set up any reserves like that. If we had set up such reserves, we would have been certain to lose them too." Well, possibly he was right. Money burns such holes in some people's pockets they can rarely resist the temptation to spend it.

Now I wish to emphasize the fact that no company in the world, and particularly no industrial company, is ever immune from the factor of obsolescence, and that obsolescence is something entirely different and separate and apart from the factor of maintaining your plants fully up to snuff. If you do not plan for the factor of obsolescence, the time will come when you will wake up and find out that you have a very much weakened position, and that you have new competitors who are making life very tough for you.

One final thought on this change in the character of assets as a company grows more mature and its assets become more liquid. There is likely to come in that period a great temptation to spill over into a lot of unrelated activities, something divergent from what the company has been doing.

The most brilliant example of this development that I know of was that of a certain retail store. This particular company made a tremendous amount of money through its regular merchandising business for perhaps seventy-five years, and it acquired so much money that it began to spill over. It went into manufacturing; it built an enormous office building; it bought a lot of small stores in various parts of the country; and in brief, it became unhealthily rich.

Well, the accumulation of these things almost wrecked this company during the 1930's, despite continued good earnings from its main store, and one of the main accomplishments of the management during the past decade has been to clear out a lot of items in their business and properties which had become a drag on the regular business.

I do not mean that a company should never change the character of its business, but I think it is a good thing to look with suspicion upon a company that has become rich in one line and is jumping over and going into another line, because these outside things may become a drag on it, and there is no special reason to believe that the management can make a success in another line as great as it has in the first.

General Motors is an exception. There are certain other exceptions, and I would not want to lay this down as a fixed rule. I am sure, however, that you should eye with suspicion a company that goes out of its own line and into something that bears little relation to its main business, as we find many instances where trouble arises as a result of such a course.

MANAGEMENT

Next, we have the factor of management, which is vitally important, as you all know, in all industrial securities. Its importance varies, however, with different types of industries and, paradoxically enough, the greater the importance of management in the industry the less suitable does that industry tend to become as a vehicle for public financing.

In order to explain what I mean, let us consider, at one extreme, the public utilities, which benefit by good management but which have also shown a great ability to survive periods of gross mismanagement because of the intrinsic strength of their tremendous assets.

At the other extreme we might place all personal service companies, such as advertising agencies, engineering firms, investment banking firms, and the like, which depend for their success largely upon the genius of one or two individuals.

Since the disappearance of these individuals from the scene will usually leave little more than a hollow shell in the company, personal service companies, I think, should be avoided like the plague by all those who sell securities to the public. I do not mean by this that you should not buy an interest in an advertising agency, but I do mean that the securities of an advertising agency, or of an investment banking firm, would be one of the most dangerous things I can conceive of to sell to the public, because such companies depend almost entirely for their success upon a few individuals who are outstanding in their ability.

I shall qualify that statement by saying that if you do sell such securities to the public, they certainly should be sold on a very low price-

earnings ratio. Advertising agencies are usually sold for about one or two times the value of the assets in the business. That gives you some idea, I think, of the general market valuation that is placed on that extreme type of personal service company.

SMALL BUSINESS

Another point I would like to make is that the general risk factor in the financing of small businesses is greater than it is in the financing of large businesses for much the same reason that I gave in connection with personal service companies.

Usually a small company depends for its success upon some one individual, and the death or retirement of that individual is likely to have a very detrimental effect on the business.

Of course, you may find a young company that is going ahead and is demonstrating tremendous vitality. If you are convinced that the management is of the highest quality, that the company is not just headed by a successful inventor—it is strange indeed, but very true, that you very seldom find an inventor who is a good manager—then you may take the risk of financing the company. Even then I assure you that you will have a much greater risk factor than if you finance a company that has gone through the fires of depressions, has tested its management, and has grown to a size where it has a certain degree of stability and pre-eminence in the industry.

Now this is not just a recommendation to buy only blue-chip stocks. I think that blue-chip stocks usually become called blue chips when they have had most of their growth, and, therefore, you may be buying them just at a point of full maturity. Nevertheless, it takes much more intelligence to buy a security in the early phases of its development than it does when it is approaching maturity. You can pick out the General Motors and the DuPonts, and they certainly will go up when the business cycle is on the upswing and they will go down when it is on the downswing, but the earlier the stage of development and, in general, the smaller the size of the company you finance, the more risk you will be taking.

THE FUNCTION OF THE INVESTMENT BANKER

I certainly would be giving a wrong impression if I implied a belief that investment bankers should avoid all risk taking. I really think that the most valuable social function of investment bankers, as well as the most profitable, arises from the promotion of new and expanding industries and not the refunding of mature issues. Society does not really need investment bankers to handle these great big refunding issues, most of which may be purchased by investing institutions. We do not perform any really important economic functions in such refunding operations.

If we did not buy these issues, the big life insurance companies would buy them direct. We do perform a valuable function, however, when we promote growing companies, when we help the management, educate the public, and bring funds in to help a particular industry develop. I am, therefore, all in favor of investment bankers devoting as much of their time and efforts to the development part of industry as is possible. I only want to emphasize the difficulties in evaluating the risk factor in this connection.

One of the things that puzzled me in the past was this: What can we do with the many individuals who ask our help in promoting new ideas and new inventions? I spent quite a lot of time with people of this type during the 1930's when there was not a great deal to do, when business opportunities in the investment business were extremely scarce. Gradually, however, I became convinced that this work was not my business; that the business of the investment banker is to be a merchant of securities, and that means the handling of securities of established and going concerns. If you spend a lot of time fussing with inventors and with very new ideas that are in too early a stage for security distribution to the public, you will not be performing what I conceive to be the proper function of the investment banker.

It took me quite a long period of time to realize that. I feel somewhat like Chancellor Hutchins of the University of Chicago when he made the following remark in a recent speech. He said, "I was president of a university for ten years before I realized I didn't have an education." It took me a long time to realize what Mr. Glore meant when he said I had a lot to learn about the investment banking business. However, you do catch on to those things, and you find eventually that the more you can concentrate your efforts within the framework of the investment banking pattern, which is the distribution of securities, the more effective your work will be.

As investment bankers, we are not supposed to manage industry, and, while we perform a very important promotional function in the development of companies, I do not think it is our function to go out and develop new ideas. I think we should work with people who have new ideas, follow their development, and help them when they are ready to get public money.

Above all, you must never forget that, when an investment banker issues any security, he remains responsible for that security as long as it is outstanding. You cannot assume that you can give your customers a ride for a few months in a bull market and then forget all about the issue, because, believe me, if you do make mistakes they come back to haunt you year after year.

The reason I am a director of a Cuban sugar company is because my firm had the misfortune to put out a bond issue in 1923 on this company, and, like most other sugar companies, it went bankrupt in 1930, and we had the task of reorganizing it. In other words, we still have that responsibility today, twenty-three years after the issue was originally sold. I just mention that as one of the things that you never can escape and, if you do your job properly, you do not wish to escape.

BUSINESS CYCLES

My remarks up to this point have been devoted to certain investment characteristics of individual corporations and of different industries. I have attempted to show how these characteristics tend to change as industries approach full maturity and are transformed from *growth* industries into *cyclical* industries. In the course of this discussion, I developed a theoretical picture of the life cycle of a typical industry. In the early phases of this cycle the forces of growth are so strong that the industry tends to develop independently of the business cycle. As the rate of growth slows down, however, the tidelike pull of the business cycle becomes more and more apparent until the trend of the industry is governed almost entirely by these regular up and down movements.

Our discussion now turns logically to an analysis of business cycles as such, and to the impact of these alternating periods of general prosperity and depression on corporate investments. In this discussion, I shall do something which I swore fifteen years ago I would never do again. I am going to make some predictions about the future course of business and, strangely enough, these predictions will be quite optimistic. You may have heard the Wall Street definition of an optimist as one who feels that the outlook is uncertain. This, I may say, is not my attitude. I am genuinely optimistic, and I hope to convince you that my reasons for this belief are somewhat more valid than those of just another Pollyanna.

Perhaps my optimism may be my saving grace in daring to make any predictions at all. When I was once so misguided as to work as a business forecaster, I made one profound discovery about human nature. I discovered that a perpetual bull might be wrong nine times out of ten, but his clientele would tend to remember only the one time he was right and promptly forget the nine times he was wrong. A perpetual bear, on the other hand, might be right nine times out of ten, but his followers would tend to remember only the one time he was wrong. Thus, if my predictions prove unjustified, you, in your charity toward my cheerfulness, will probably forget them. If, however, they should chance to be substantially correct, you will tend to remember them and hail me as a true prophet.

TYPES OF BUSINESS CYCLES

Doubtless all of you are familiar with the term *business cycle* and with the actual effects of those mysterious rhythmic forces which carry business as a whole from a peak of prosperity to the depths of depression and back again. Many of you may be surprised to learn, however, that economists generally recognize, not one type of business cycle, but three entirely separate and distinct types. These may be classified as *the short cycle*, *the intermediate cycle*, and *the long cycle*.

We have here a chart (Chart 2) which shows a theoretical picture of these three different types of cycles and of their interaction one upon the other. It may look like a complicated geometrical pattern for a rug, or an abstract drawing, but actually it is quite simple to understand. Curve I represents the *short* or *three-year cycle*; curve II represents the *intermediate cycle*, which includes three short cycles; and curve III represents the *long cycle*, which includes six intermediate cycles and eighteen short cycles. Curve IV is a mathematical combination of the three other curves, and its irregular movements are supposed to simulate the actual fluctuations of business.

I should like to emphasize the fact that this chart presents a purely theoretical picture, and not the actual fluctuations of business. In the real world, the symmetry of these cyclical movements is distorted constantly by extraneous influences, such as political upheavals, wars, famines, earthquakes, and so on. Nevertheless, it is surprising to note that the actual fluctuations of business do approximate those of our theoretical assumptions as shown by curve IV.

I could give you a technical and complicated explanation of each of these three cycles, but it would only tend to confuse you, and, as a matter of fact, very few economists agree among themselves as to the fundamental explanations of these movements. My explanations, therefore, will be as simple and brief as possible.

THE SHORT CYCLE

The *short cycle* can best be understood as the normal rhythm of business enterprise. This cycle has been found to vary in length from 33 to 40 months. Those of you who have studied the history of any mature industry, such as cotton textiles, steel, rubber, cement, rayon, and even automobiles, are probably aware of the fact that most of them tend to move in three-year cycles. One year of recovery, one year of full prosperity, and one year of recession. The perpetual tendency of business to expand causes it periodically to move ahead of demand. Prices then tend to weaken and production slows down until the excessive output is absorbed into the channels of consumption. Thus, industry never pro-

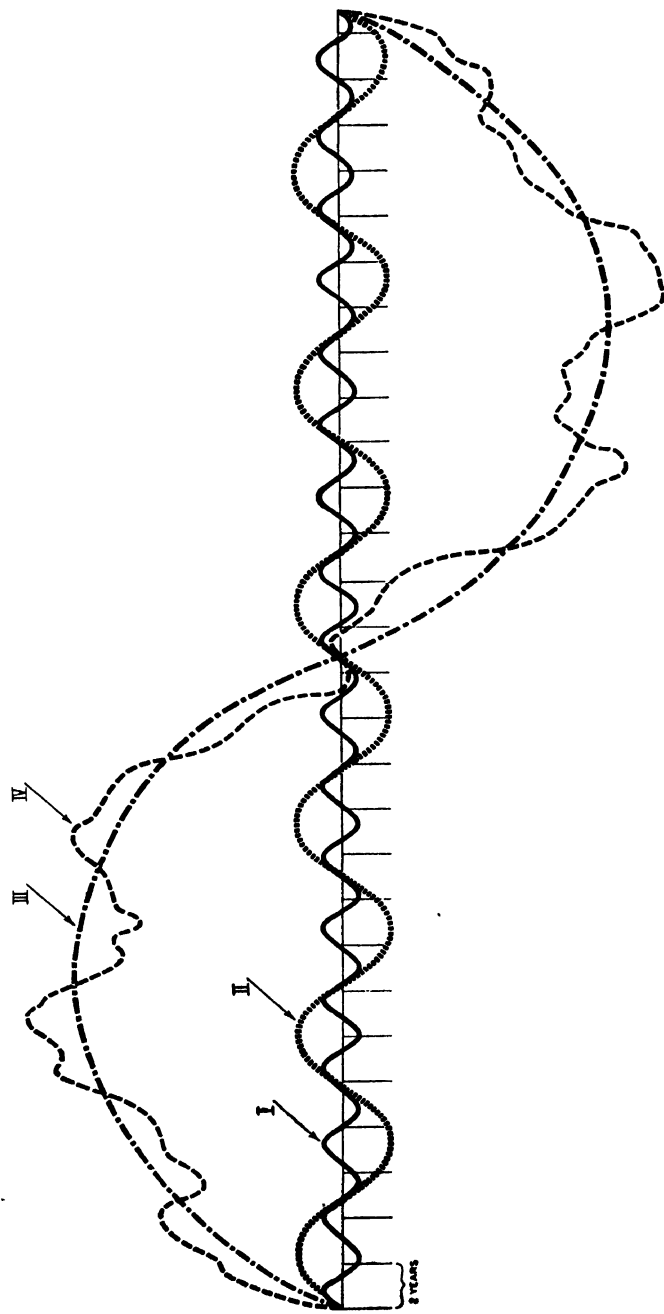


CHART 2. Business cycles. (From Schumpeter, J. A., *Business Cycles*. McGraw-Hill Book Co., 1939)

gresses in a smooth straight line, but moves ahead by fits and starts, and the cumulative effect of these convulsive movements gives us the so-called short cycle. The cause of this cycle seems entirely inherent in the nature of business enterprise itself and is in no way a function of money or credit inflation. Thus, it does not of itself produce inflationary booms and depressions.

The decade of the 1920's gives us some clear-cut examples of the short cycle. Business recovered after the depression of 1921, reached a peak in 1923, and then suffered a mild recession in 1924. A similar recovery took place in 1925 and 1926, and another mild recession occurred in 1927. Business went ahead again in 1928, reached a peak in 1929, and you know what happened in 1930. The complication here is that the recession in 1930 coincided with and accentuated the collapse from the peak of an *intermediate cycle*. The decade of the 1930's does not present such clear-cut evidence of the short cycle because of the violence and chaotic nature of the general fluctuations. Nevertheless it does show up in the movements of separate industries.

THE INTERMEDIATE CYCLE

The *intermediate cycle* is what most businessmen think of when they talk of business cycles. It has been found to vary in length from $7\frac{1}{2}$ to 11 years and to average approximately $9\frac{1}{2}$ years. One full intermediate cycle may be reckoned from the peak of the boom in the spring of 1920 to the peak in the fall of 1929, a period of $9\frac{1}{2}$ years. The next full cycle of this kind lasted exactly 8 years, from September, 1929, to September, 1937. It is difficult to give a simple explanation of the intermediate cycle, except to say that it is almost always accompanied by some form of monetary or credit inflation which causes booms, and is followed in turn by deflation and depression.

The late Paul Warburg once said that the only way to cure depressions was to sit on the lid during the preceding booms. Apparently the collective memory of mankind is short and tends to forget the troubles of the last depression every eight or ten years. One difficulty is that the form of the monetary or credit inflation is somewhat different each time, and this tends to fool most people. Thus, the boom in 1919 and 1920 was characterized by a tremendous rise in commodity prices. From 1922 to 1929 commodity prices did not rise at all and, because of this fact, the public was lulled into a false sense of security and ignored the tremendous inflation taking place in real estate and security values. In 1937, with no real boom in commodities or security prices, the chief inflationary influence was the tremendous expansion in installment credits, which was accentuated by the influence of the Soldiers' Bonus payments. Thus,

most people are always on guard against the dangers of the last boom and are never prepared for the one right at hand.

THE LONG CYCLE

We come now to the *long cycle* which is the most fascinating of all to me, and the one most pertinent to our present discussion. It has been found to average between 50 and 56 years in length. I should point out here that the long cycle shown in our chart has arbitrarily been made 56½ years in length in order to achieve symmetrical proportions with the shorter cycles, and not for the purpose of a realistic presentation. I should also point out that the slope of the curve in our chart is much steeper than it should be, in order to provide a realistic picture. To be realistic, the long cycle should be represented by a flat curve through which the peaks of the intermediate curves would project. You can see that this would give a different appearance to curve IV, which would then be much more like the movements of actual business; but it would make our chart a hopeless jumble of lines.

Because of the relative shortness of modern industrial history, economists have only been able to discern, with any degree of certainty, four historical examples of the long cycle. It must be said that this is hardly enough to prove scientifically the existence of such a cycle. Nevertheless, it is enough to provide strong weight of evidence in its favor. In general, it may be said that the upswing of the long cycle has been inaugurated by revolutionary inventions, or of business techniques, which have provided the momentum for a broad expansion of business which has lasted approximately a quarter of a century. The downward phase of the cycle, of the same duration, may be described as the period during which these inventions or techniques are digested and absorbed into the economic system. The upward phase is characterized by a rising level of commodity prices and of stock and real estate values. It is also characterized by an expansion in the demand for new capital and, as a consequence, rising interest rates. It is a time of prosperity for agriculture and for the producers of other raw materials. While manufacturing industries are also prosperous, it is a time when we are likely to hear an outcry against the high cost of living in the big industrial centers.

The downward phase of the cycle has characteristics just the reverse of the above. These characteristics include declining prices of commodities, equity securities, and real estate, and a fall in interest rates because of a stagnant capital market. We see widespread agrarian distress and chronic unemployment in the cities. It is likely to be a time of crackpot economic panaceas, political disorders, and revolutionary upheavals throughout the world.

HISTORY OF LONG CYCLES

The first of the long cycles for which we have good historical evidence is that which started its upward phase about the middle of the eighteenth century and ended its downswing around 1795. It was the period of the so-called Agricultural Revolution in England, when primitive medieval methods of farming were replaced by the introduction of scientific agriculture. The resulting increase in supplies of food and raw materials permitted the movement of farm workers to the cities, which in turn provided the labor supply for the rising manufacturing establishments.

The second of our long cycles began about 1795 and is usually known as the period of the so-called Industrial Revolution. It was the time when Watt's steam engine first entered the economic picture, when Whitney's cotton gin was invented, and when great strides were made in the development of textile machinery and in the methods of making iron and steel. This period of expansion reached a peak around 1818, three years after the Battle of Waterloo, and was followed by a long period of decline which terminated about 1845.

It is interesting to point out in passing that the years from 1820 to 1825 witnessed a great outpouring of British capital into foreign loans, particularly to the young republics of Latin America. The money was loaned for every conceivable uneconomic purpose, such as the building of battleships and palaces. The bubble burst in 1825, practically all of the loans went into default, and twenty years had to elapse before British capital started moving again into Latin America. Almost exactly a century later this country launched a similar venture in foreign lending, and with exactly the same results. The historical parallels between these two periods are amazing. The British were not so much smarter than we; they merely went to school one hundred years sooner. Another interesting fact to note is that the decade of the 1840's, which included the low point of the end of this cycle, was a period of great economic distress and of widespread revolutionary upheavals throughout Europe.

The next cycle which started upward about 1845 was clearly motivated by the enormous expansion in railroad building in this country and in western Europe. This brought a great period of expansion which reached a peak in 1870 in Europe and 1872 in the United States.

The long downswing which followed the panic of 1873 did not terminate until after the election of McKinley in 1896. The opening of our West by the railroads flooded the consuming centers with cheap food, and commodity prices fell steadily throughout this period. Most of our railroads went through one or more bankruptcies, while real estate values and interest rates declined. Unemployment was widespread and agrarian

discontent increased steadily, and finally culminated in the movement led by William Jennings Bryan.

Several different explanations have been given as to the motivation of the next great period of expansion which started about 1897. Many economists have ascribed it to the sharp increase in gold discoveries which occurred in the 1890's. In my opinion, gold played a relatively minor part. I should give the primary role to several new and revolutionary industries, such as the electric power industry, the automobile and chemical industries, and above all to the introduction of the technique of mass production. In any event, we witnessed a period of expansion which lasted, with minor interruptions, until it reached a peak in the boom of 1920.

THE CURRENT PHASE

You may now begin to see what I am driving at; namely, that the whole period from 1920 to date has given us an almost perfect example of the downward phase of one long cycle. You may find it difficult to believe that the decade of the 1920's was part of a downswing, but there is much evidence to support such a view. Despite the great boom in the stock market, commodity prices refused to rise at all, and we heard a great deal during those hectic days of technological unemployment, overcapacity of industry, and agrarian distress. Long-term interest rates remained relatively low, even during the great rise in short-term rates in 1928 and 1929. The decade of the 1930's provides, of course, much stronger evidence for our thesis. Commodity prices refused to rise despite all the pump priming, crop restrictions, and the slaughtering of little pigs. Unemployment remained at staggering levels despite the outpourings of the AAA, WPA, PWA, and so on. The capital market stagnated and interest rates fell to the lowest levels of modern times. To say that it was a period of crackpot economic ideas and political upheavals would be the choicest of understatements.

It is interesting to note that the theory of common stocks as long-term investments reached its greatest vogue in 1929, just when they had ceased to have any possible attraction for either short- or long-term holding. By the same token it will probably also be true that common stocks will be very unpopular just when the next great forward movement gets under way. Referring back to the boom in the 1920's, I think it is significant to note that the shares of raw material, mining, and oil industries performed much more poorly than those of manufacturing industries which benefited by cheap raw materials and a high degree of control over their own markets. This is just what our theory would lead us to expect. The

raw material stocks, conversely, should be much better performers during the upswing of a long cycle.

According to our theory, we are now in the late stage of an upswing of an intermediate cycle, and almost at the end of a downward phase of a long cycle. The economic pattern, of course, has been greatly distorted by World War II. Thus, the war with its inevitable monetary inflation, has accentuated the current upswing of the intermediate cycle and has undoubtedly prolonged the duration of this movement. Nevertheless, it is interesting to note that interest rates have continued their downward trend during the last several years, in contrast to the sharp advance which took place during and immediately following World War I.

INTEREST RATES

This recent experience has convinced our so-called *money managers* in Washington, and also a large segment of the public, that governmental authorities have finally learned the secret of controlling interest rates. This confidence is causing most of them to ignore the underlying conditions of demand and supply of capital, which actually have been chiefly responsible for these developments. It is also certain to produce disillusionment when the demand for capital once more becomes heavy in relation to supply.

I certainly do not wish to leave the impression that I anticipate any near-term drastic advance in interest rates. I merely wish to emphasize certain underlying economic factors. We may witness some very moderate hardening of interest rates during the balance of the current inflationary boom. This should be followed by another decline when we enter the next recession or depression which is certain to come. Thereafter I anticipate a long slow upward movement of interest rates comparable to that which took place between 1902 and 1920.

STOCK PRICES

While it is true that the stock market has shown an almost uninterrupted rise since 1942, I think the most interesting fact to observe is that this rise has been relatively small in relation to the increase in money supply and the rise in commodity prices. If the stock market index were related to the level of commodity prices of 1937, we should find that stocks were considerably lower in June, 1946, in terms of commodity prices than they were at the peak of the last upswing. Many observers have noted this discrepancy and have usually taken it to mean that stock prices are still cheap. If, however, we look at the problem in terms of the long cycle, we may have a good explanation as to why it has not

been possible, despite the most terrific inflationary pressures, to drive stock prices to much higher levels.

Although we may, and probably shall, see stock prices at higher levels before the end of the current upswing, we must never forget that we have already lived through one of the longest bull markets on record, and that each passing month makes more dangerous the continued holding of common stocks. It seems to me inevitable that we must pass through a period of serious readjustment and deflation of costs and prices before we settle down to a firm foundation from which the next great forward movement can start. In other words, I am fairly pessimistic for the short run, but optimistic for the longer run.

THE NEXT FORWARD MOVEMENT

Entirely aside from any theory of cycles, there are strong reasons for believing that the liquidation of the effects of the war will be followed by one of the greatest periods of industrial expansion in modern industrial history. At this stage it is obviously impossible to say what is likely to be the primary motivation for such a forward movement. It does seem clear, however, that once again the ability of the world to consume has caught up with its ability to produce.

One important development which could provide a tremendous stimulus to world-wide expansion would be the economic and political unification of the nations of western Europe under a system of private enterprise. The economies of these western European nations, including that of Great Britain, have become archaic in face of the development of great continental empires, such as those of Russia and the United States. Only by unification can they succeed in modernizing their industrial organizations and combine mass production techniques with the mass markets which would then be available. The gravity of their present plight, together with the overwhelming threat of communism, makes me believe there is now, for the first time, a real hope of such an eventuality. No other development could be more important for the future peace and prosperity of the world.

REVIEW QUESTIONS

1. Name two principal distinctions between a typical commercial bank loan and a typical investment credit.
2. Name five basic factors to consider in the valuation of any security.
3. Name and describe six phases in the life cycle of industries and give examples of industries believed to be in each of these phases.
4. What are the responsibilities of an investment banker with respect to new enterprise?
5. What is the average duration of short business cycles, major business cycles?

6. Into what three distinct types may business cycles be classified?
7. What is the normal life span of each of these cycles?
8. What appear to be the economic factors underlying each of these cycles?
9. Cite periods as examples of each type of business cycle.
10. How do interest rates and stock prices tie into the theory of business cycles?

MUNICIPAL SECURITIES

by H. C. Taylor, Assistant Cashier, Chase National Bank

IN STUDYING HISTORY we find that, as civilization progressed, more and more of the services that the individual had been performing for himself came to be performed by the state. If primitive man wanted to take a bath, he used the nearest lake; or, if he wanted to go somewhere, he had to cut a path through the woods, or perhaps swim a river. But the Romans saw the need for public baths, and constructed them. And it is also with the Roman Empire that we find the first large-scale and systematic program of road and bridge building. As people began to realize that by cooperation they could obtain many things that, acting as individuals, they would have to do without, the demand for public improvements became greater and greater, and the varieties of services demanded became more diversified.

In this country, a state or a municipality can only spend its funds for a public purpose. What constitutes a public purpose is not always easy to determine. The decisions of the courts have not been uniform, and what might be considered a proper public purpose in one state might not necessarily be considered so in another.

As in everything else, styles change, and we have changes of styles in municipal finance. It is probable that 30 or 40 years ago if some municipality had attempted to issue bonds to build a golf course, there would have been a public furor. But, through custom, a golf course has become considered a proper municipal purpose.

TYPES OF MUNICIPAL EXPENDITURES

Municipal expenditures are of two kinds: (1) operating expenses which are paid from current taxes and other current income of the municipality, such as fines, fees, and the like, and (2) capital expenditures which in practically all instances are financed by the sale of bonds.

Operating expenses, as the name implies, are for the ordinary day-to-day running of the municipality and include salaries, wages, cost of repairing streets, repairs to buildings, minor construction, and some capital expenditures of a recurring nature, such as expenditures for fire-fighting

apparatus, police cars, and so forth. Also, one of the most important items of running expense, and one which, in a good many cases, is the largest single item, is debt service.

Under capital expenditures are listed the so-called long-term improvements which are usually of such a size that they cannot be generally included in the current budget. For example, a municipality might have a one million dollar operating budget. It might want to construct a water system or a utility plant costing four or five million dollars. Obviously, that could not be included in the current budget without at least quadrupling the tax rate, which would be prohibitive. Another point is that the life of an improvement of that character may run forty, fifty, or sixty years, and while it is still being enjoyed, the people who are getting the benefit may be an entirely different set of taxpayers from those who were in the municipality when it was built. Obviously, it is not fair for the original taxpayers to carry the entire burden of an expenditure for an improvement from which later taxpayers will also get the benefits.

In the early days, capital expenditures were quite moderate and were financed largely by tax collections, sale of public lands, contributions by patriotic citizens, and even by the proceeds of lotteries. There was also a substantial amount of borrowing from the banks. As demands for municipal improvements increased, these sources proved inadequate and municipal bond issues began to make their appearance. While it is not entirely clear when the first municipal bond issue appeared in this country, New York City brought out an issue around 1828.

GROWTH OF MUNICIPAL DEBT

At first, by far the largest part of the public debt was created by the states. The reason for this was that the states wished to raise money in order to give aid to the federal government in developing the country through the construction of transportation facilities, and there were hundreds of thousands of state-aid bonds issued to provide funds with which to build canals, turnpikes, and railroads. For instance, in 1843, the total combined debt of all the states was about \$232,000,000, according to the United States Census Reports, whereas the total debt of all the municipal subdivisions was \$28,000,000, or about one-tenth of the total state debt. Incidentally, at that time, the federal government debt was the lowest of the three and was only \$20,000,000.

The country ran into an economic depression within a few years after that time, and many of the states which had issued these bonds began to find difficulty in servicing them, with the result that some went into default and others were threatened with default. There was a popular

clamor on the part of the residents of the states to do away with additional issuance of state bonds, and one by one the states put either prohibitions or restrictions on the issuance of additional state debt.

However, at that stage in the development of the country, the demand for such facilities was very strong, and when the states were restricted in their bond issuance, municipalities began to issue their obligations in larger quantities. By 1902 the total state funded debt was practically unchanged from what it was in 1843, but the bonded debt of municipalities had increased during the period to \$1,630,000,000, or about 60 times larger than it was in 1843.

After the first World War the states and municipalities greatly increased their bonded debt. There were several reasons for this. In the first place, during the war, many of the states lifted the restrictions that they had previously placed on the issuance of bonds. Second, there was a large-scale development in the use of the automobile with its accompanying demand for better roads. Third, the standard of living in the postwar era was considerably higher than it had been, resulting in increasing demands for services on the part of the municipalities.

As a result of these various factors, by 1922 the state debt was about \$1,106,000,000 and the municipal debt was up to \$8,472,000,000. By 1932 the combined debt was close to \$18,000,000,000. In 1940, we reached the peak up to this time, with a combined state debt of about \$3,280,000,000 and a combined municipal debt of \$16,057,000,000.

Since 1940 there has been a decline because of the fact that the municipalities and states could not get labor and material for many new projects. Also, they wanted to cooperate with the federal government in limiting their issues so as not to divert funds from the war bond drives. Further, there was a disposition to save as much construction as possible for the postwar period, with the thought that there might be considerable unemployment. Thus, on June 30, 1945, the total state debt was \$2,471,000,000 and the municipal debt was \$13,864,000,000. In speaking of debt, we are, of course, referring to funded debt.

With the increase in municipal debt, there came gradual additions to the purposes for which the bonds were issued. There were the traditional purposes, such as streets, schools, water, sewers, court houses, jails, and so forth. But some new purposes began to make their appearance, such as parking lots, playgrounds, cemeteries, airports, traffic signals, golf courses, and beach improvements. In fact, one small town has an issue of bonds outstanding, the proceeds of which were used to build a crematorium. It is also indicative of current trends that one city recently voted approval of an underground parking garage to be financed by revenue bonds, and that another has completed a study for financing a 6,000-car-

parking lot connected by subway to the business district. Still another city is planning several underground parking garages.

The amount of state and municipal bonds issued each year, of course, varies. During the five-year period from 1937 to 1941 inclusive, the issuance of long-term bonds ranged from about \$1,000,000,000 to approximately \$1,500,000,000. During 1942, 1943, and 1944, the per annum average of such issues dropped to less than \$600,000,000. This was due to the war and the consequent slowing down in new financing for other than war purposes. In 1945, the amount of new issues increased to slightly over \$800,000,000. During the first six months of 1946 new issues totaled \$600,000,000.

PRICE TRENDS

The yield on municipal bonds usually follows general money rates; however, because the interest derived from municipal bonds is exempt from federal income taxes, the prices at which they sell are higher than other classes of securities which do not have the benefit of this immunity. Another factor of demand is their security background and fine record of payments over the years. In 1901 the average yield of 20 long-term municipals, according to *The Bond Buyer Index*, was about 3.10 per cent. The market gradually went lower (yields higher) from then until the middle of 1921, when it reached a low, or the yield reached a high, of 5.26 per cent. There was a rather sharp recovery after that, and for about 10 years, yields reflected by *The Bond Buyer Index* of 20 long-term municipal bonds ranged between 3.74 per cent and 4.49 per cent—mainly over 4 per cent.

Then the 1930 depression came upon us and some of the municipalities began to default. By May, 1933, the average yield on municipal bonds had reached an all-time high of 5.69 per cent.

This was the period in which the PWA came into existence, and there was a considerable amount of financing done through the federal government at that time. This was due to the fact that many municipalities, owing to market conditions, could not sell their bonds, while the federal government was encouraging all types of public works, road construction and so forth to increase employment. The PWA, therefore, loaned money to municipalities, provided their credit was satisfactory, at a 4 per cent rate regardless of the size of the municipality. Gradually municipal credit began to improve, and as the municipalities were able to sell bonds at better than 4 per cent in the open market, they ceased going to the federal government, and financing through that agency gradually disappeared.

DEFINITION

It is difficult to find a satisfactory definition of *municipality*. Therefore, for our purpose, the best procedure is simply to use the popular interpretation that is used by dealers and to think of a municipality as a *political subdivision of a state*. This interpretation is broad enough to cover all issues of securities included in the general term *municipals*.

These municipals include, among other things, obligations of cities, counties, towns, villages, boroughs, and so forth, whether they be general obligations of those entities or special obligations payable from some special source of revenue. They also include the obligations of various districts such as school districts, road districts, water districts, garbage removal districts, sidewalk districts, and so on.

Municipal revenue bonds are also generally considered as municipals, although they are not payable from general taxation but from earnings of a municipally owned facility. Then, as mentioned before, state bonds are one great class by themselves which, although not strictly municipals, are included in the category by dealers.

Also on the municipal dealer's list we shall find United States Territorial or Insular bonds—and housing authority bonds, none of which are, strictly speaking, United States municipal bonds.

TYPES OF MUNICIPAL BONDS

Aside from the state bonds, the most important class of municipal is the so-called general obligation bond, which is a bond payable from the full taxing power of the municipality. There are other types of municipal bonds, and the difference between these is clearly set forth in the quotation below from an article which was written a few years ago by David M. Wood of Wood, Hoffman, King and Dawson, one of the country's leading firms of municipal attorneys.

The bonds of all political subdivisions of the states may be divided into two classes: (1) those for the payment of which the entire faith and credit of a political subdivision are pledged, and (2) those which are payable solely out of a special fund, without carrying a pledge of any other assets, or of the faith and credit of a political subdivision. When a municipality, county or district issues a bond of the first class, it pledges to the investor its entire revenues for the payment of the obligation. It may have also pledged a special fund as the primary source of payment, but in the event that such fund should prove insufficient, it agrees to apply any other revenue it may have, from whatever source derived, to make good the deficiency. Such bonds are usually called *general obligations*.

An example of a bond which is a general obligation, but which is payable primarily from another source, might be a water bond. Such a bond might be issued by the municipality with the pledge of its full faith and

credit, but the bond in practice would be serviced from the earnings of the municipality's water department. If, however, for any reason, the revenues from the water department are insufficient, then the municipality has pledged itself to levy sufficient taxation to make up the deficit.

If there is no limit on its power of taxation, then taxes must be levied by the municipality at such a rate as will produce sufficient funds to provide for the payment of the principal and interest of the obligation at maturity. Such a bond is usually called an *unlimited tax bond*. If its power of taxation is limited by constitutional or statutory provision, the political subdivision, by the issuance of such a bond, pledges that it will exercise all of the powers of taxation, assessment, or other means of raising revenue, which it possesses for the payment of the obligation or to make good any deficiency in a special fund primarily pledged for its payment. Such bonds are ordinarily called by investment bankers *limited tax bonds*.

If there is a limit on the rate of tax which a municipality can levy, and if it has reached that limit and needs more money to service its bonds, the only way it can get it is either to cut down operating expenses or to look elsewhere, for example, to a municipal sales tax, to other forms of taxation, or it must increase the assessed valuation.

But it will be observed that the bond may be payable from the avails of a limited tax, or even a special assessment, or other source of revenue, and still constitute a general obligation. The term *general obligation* simply means that all of the resources of the municipality or district are pledged for its payment. If a public corporation has no means of raising revenue except by special assessment, levying license fees, etc., the bonds of such a corporation are, nevertheless, general obligations, provided all its revenues, from whatever source derived, are pledged for their payment.

The second class of bonds includes a great many different types of securities. In the issuance of these bonds the political subdivision does not pledge all of its revenues for the payment of the principal and interest of the obligation, but merely a limited portion thereof. If these revenues, or, in other words, the special fund provided for the payment of the debt, should prove insufficient for the purpose, the issuing body, having never pledged anything more, is under no obligation to resort to other revenues to prevent a default even though it may possess adequate revenues, derived from some other source, by which it could provide for the payment of the principal and interest of the bonds.

The bondholder, in purchasing such a bond, has agreed to look solely to the special fund for the payment of the security, and cannot compel the political subdivision to apply other revenues to its payment should the special fund prove insufficient. These bonds are ordinarily called *limited obligation bonds, revenue bonds, etc.*

EXEMPTION OF STATE AND MUNICIPAL BONDS FROM FEDERAL INCOME TAXES

The interest on state and municipal bonds is fully exempt from federal income taxes, both normal and surtax. Municipalities in the final

analysis derive their existence and powers from the state in which they are located and, therefore, the interest from their bonds, like that of state bonds, enjoys freedom from federal taxation under the doctrine of reciprocal immunity whereby the federal government may not tax the governmental functions of the states, nor the states the functions of the federal government.

In the case of housing authority bonds and bonds of territories and insular possessions, the tax exemption exists by reason of the fact that it is written into the act under which the bonds are issued.

The tax exemption of state and municipal securities is nothing that is written into the bonds; it is inherent in our Constitution as interpreted by the United States Supreme Court under the doctrine of reciprocal immunity. Also, the exemption is specified in the Federal Income Tax Law. Thus there are two lines protecting state and municipal securities from federal income taxes—statutory and constitutional.

While this reciprocal tax immunity is not expressly stated in our Constitution in so many words, the United States Supreme Court has consistently held over the years that it is the constitutional law of our land under our dual system of government. To use the words of that Court in a decision in 1871—*Collector v. Day*:

It is admitted that there is no express provision in the Constitution that prohibits the general government from taxing the means and instrumentalities of the states, nor is there any prohibiting the states from taxing the means and instrumentalities of that government. In both cases the exemption rests upon necessary implication, and is upheld by the great law of self preservation; as any government, whose means employed in conducting its operations, if subject to the control of another and distinct government, can exist only at the mercy of that government. Of what avail are these means if another power may tax them at discretion?

From time to time recommendations have been made to submit to the states a constitutional amendment permitting the federal government to tax the interest from future issues of state and municipal securities and permitting the states to tax the interest from future issues of federal securities. Such an amendment has never been approved by Congress.

Over a period of several years beginning in 1938, the Administration urged Congress to enact a statute empowering the federal government to tax the interest from future issues of state and municipal securities and to confer similar power upon the states relative to future issues of federal securities. This proposal was very strongly opposed, by the states and others, and was rejected by Congress.

Subsequently, during the forepart of 1942, the effort was renewed, this time to include not only future issues of state and municipal bonds, but

also those outstanding. Here again Congress rejected the proposal. Obviously in the case of outstanding bonds, good faith is involved. The people holding these bonds bought them with the distinct understanding that they were exempt from federal taxation. Had the effort to tax the interest on outstanding issues been successful, it would have shaken public confidence in the good faith of the government and its respect for assurances, pledges, and the sanctity of obligations.

Substantial opinion supports the view that to impose the federal tax upon future issues of state and municipal bonds by statutory enactment in the absence of a constitutional amendment clearly conferring that authority would create a precedent through which the federal government might ultimately: (1) tax the revenues upon which the states and municipalities depend for their existence, (2) tax the operations of government of the states, and (3) dominate and control the states and their governmental units, making them subservient to the will of the federal government. If any change in the existing reciprocal tax immunity is to be sought, it should be by constitutional amendment adequately safeguarding the sovereignty of the states.

Despite the decisions of the United States Supreme Court, the Treasury Department in 1941 levied federal income taxes on certain holders of bonds of the Port of New York Authority and the Triborough Bridge Authority. Simultaneously with these actions the Treasury Department announced intent to ultimately establish the right of the federal government to levy income taxes upon all state and municipal securities.

The matter was taken through the courts. The United States Tax Court and the United States Circuit Court of Appeals upheld the exemption from federal income taxes of the interest on the bonds of these authorities. Both decisions were based upon the statutory provision. Neither court found the need to go into the constitutional phase of the subject. The Treasury Department petitioned the United States Supreme Court to review the case, but that court denied the petition.

OUTLETS FOR MUNICIPAL BONDS

At present, there are three principal outlets for municipals: trust funds, individuals, and commercial banks.

Of course, under the present income tax rates, the tax-exempt feature of municipal securities is a great asset to anybody with a large annual income from investments. For example, under the current income tax law, a person with a taxable income of \$44,000 pays a total tax rate of 65.55 per cent combined normal and surtax on the last \$6,000 of his income. But if \$6,000 of his income is derived from a 4 per cent taxable investment such as a mortgage, he can sell that and invest the proceeds

in a tax-exempt bond yielding only 1.78 per cent, and get the same net yield as he had before as long as the tax rate is not lowered.

As the tax bracket goes up, the advantage is even greater. For example, in the \$100,000 income bracket, on the last \$10,000 the taxpayer has to pay a tax of 82.65 per cent. This would mean that a tax-exempt investment yielding 0.694 per cent would equal a taxable investment yielding 4 per cent. In the over-\$200,000 bracket, the equivalent of a 4 per cent taxable yield would be derived from a tax-exempt investment yielding 0.542 per cent.

An important outlet for municipal securities at this particular time is commercial banks. Commercial banks, as well as most other corporations having a net taxable income of \$50,000 or over, pay a combined normal and surtax federal income tax of 38 per cent on their net income. Those with a lower net income enjoy a lower level of tax. However, those having taxable income in excess of \$25,000 and up to \$50,000 are subject to a combined normal and surtax top level rate of 53 per cent on that part of their taxable income between \$25,000 and \$50,000. Thus it is apparent that the tax-exempt feature is an important factor in these situations, particularly so where the taxable income is subject to the top bracket of 53 per cent.

In view of this seemingly odd tax rate arrangement, it may be well to point out that the application of the 53 per cent tax, along with the lower rates on less than \$25,000 taxable income, as a practical matter, represents in most instances a lower over-all levy than 38 per cent.

Before municipal bond prices reached their present levels there were also several other important buyers, such as corporations, municipal sinking funds, municipal pension funds, insurance companies, and mutual savings banks.

DISTRIBUTION OF MUNICIPAL BONDS

With minor exceptions, the distribution and sale of municipals to the purchasers we have just described is done by municipal bond dealers or banks with bond departments. They act as underwriters, or principals, purchasing bonds for their own account, and then reselling them at a higher price if possible.

One of their most important functions is to bring together the municipality that wishes to sell the bonds and the investor who has money to lend. That places a double responsibility on the investment house. In the first place, it is performing a public function in providing funds to the municipality that must make essential improvements. Obviously, it would be impossible for a municipality to locate the investors who would eventually buy its bonds. In the second place, the investment house has

a responsibility in the protection of the investors. Most investment houses are looked to by their clients for guidance in whatever they buy, and there is a responsibility to see that the bonds which they handle are satisfactorily secured.

There is one important difference between dealers and dealer banks. A dealer can handle all types of municipals, that is, general obligations, revenue bonds, district bonds, bonds serviced from special sources of revenue, and the like. Under the Banking Act a dealer bank can only handle, as principal, the general obligations of a state or a municipality; he is excluded from handling the various other types of bonds. There was a time when dealer banks were given special permission to deal in Port Authority and Triborough Bridge Authority bonds, but this was subsequently rescinded.

The second important class of house which handles municipals is the municipal bond brokers. They act principally as the contact between dealers and act as agent rather than as principal. Another function of the broker is to assist dealers. When the dealer wishes to accumulate certain bonds, he sometimes does not want to have it known that he is doing so. He may, therefore, act through a broker who will buy the bonds without disclosing the name of the ultimate purchaser.

FORM OF MUNICIPAL BONDS

There are two forms of municipal bonds, coupon and registered. The coupon bond is transferrable by delivery to bearer, whereas a registered bond is registered on the books of the municipality and title can only be transferred by endorsement. Therefore, one of the advantages of a registered bond is that in case it is stolen or lost there is a certain protection for the registered owner. On the other hand, the advantage of the coupon bond is that it is more marketable and is easier to use for collateral.

In many instances, coupon bonds have the privilege of registration, either as to principal only or as to principal and interest. If a bond is registered as to principal only, the coupons are left on the bond and are cashed to collect the interest. At maturity, however, the registered owner is the only person who can be paid the principal of the bond. If it is registered as to principal and interest, in other words is a fully registered bond, the coupons are detached, the name recorded on the books of the municipality, and interest payments are sent to the registered holder by check. In most instances, municipals in coupon form are in \$1,000 denominations. Registered bonds usually come in larger denominations, if desired, and in some cases may be issued in denominations as high as \$1,000,000.

One feature in connection with municipal bonds which the IBA advocates, and which ought to be mentioned, is that municipal bonds should be prepared by one of the several reputable bank-note companies that are acceptable to the major stock exchanges of the country. The reason for this is that these bank-note companies are very careful to check the disposition of their stock. They furnish blank bond borders and then print the details on them. However, their stock is kept under lock and is very carefully counted; if any bonds are spoiled in the process of preparation of the issue, they are burned and definitely accounted for, which makes the possibility of forgery extremely difficult. On the other hand, there are quite a number of cases where the municipality, particularly a smaller one, will simply go to a local printer, many of whom have bond borders in stock of a type that may be obtained from any stationer. In such cases, there are, of course, limitless possibilities for forgery. In actuality, since the municipal dealer usually wants to know the source of the bond he buys, the possibility of fraud is remote. However, such a possibility does exist where care is not taken in the preparation of the bonds.

MUNICIPALS TRADED ON A YIELD BASIS

There is one notable difference in the practices followed in trading in municipals and corporate bonds. Whereas corporate bonds are nearly always sold at a dollar price, that is, so much per hundred, municipal bonds, particularly new issues, are usually offered on a yield basis. We shall note, in examining any list of current municipal offerings, that in practically all cases the bonds are offered on the basis of yield rather than at a dollar price. Of course, when such bonds are delivered the dollar price must be computed.

When bonds are offered on a yield basis the dollar price is changing daily as the maturity shortens. When, as is sometimes the case in a new offering of serial maturities, the longer maturities are offered at a dollar price, that dollar price is constant unless it is eventually changed.

To state this in another way, municipals are usually sold at a price to yield the purchaser a definite return at maturity. This yield to maturity is called the basis on which the bond is sold, and the book of tables which gives the prices of bonds, the various bases for the various lengths of maturity and the different coupon rates is called a basis book. There is a discussion of the use of these tables in Chapter 4; however, certain comments are appropriate at this point.

In the basis book, the coupon rates will probably run at the present time from $\frac{3}{4}$ of 1 per cent to as high as 6 per cent. The yields will start at 0.25 per cent or less and perhaps run as high as 6 to 8 per cent.

It must be kept in mind that for a given yield and maturity, the higher the coupon, the higher the price. Also, whether it is a premium or a discount bond, given the same coupon and maturity, as the yield goes up the price goes down.

On a premium bond at a given basis, as the maturity lengthens the price increases. For instance, given a 1 per cent coupon at a yield of 0.95 per cent, the price of the 10-year maturity is 100.48; of the 10½-year maturity, 100.50; of the 11-year maturity, 100.52.

On a discount bond at a given basis, as the maturity lengthens the price decreases. For example, given a 1 per cent coupon at a 1.30 basis, the price for the 10-year maturity is 97.20; for the 10½-year maturity, 97.06; for the 11-year maturity, 96.93.

It will also be noted that there is a constant relationship between prices, whether they are varied because of differences in yield or differences in coupon rate or maturity. For instance, the price of a 10-year 1½ per cent bond on a 1.10 basis is 103.78. A 10-year 1½ on a 1.20 basis is 102.82. Therefore, if we divide the sum of those two prices, which is 206.60, by 2 we get a price of 103.30, which would be the price of this bond on a 1.15 basis.

Similarly, the prices of a 10-year 1 per cent bond on a 1.40 basis, and an 11-year 1 per cent bond on a 1.40 basis, added together and divided by 2, results in 96.11, which is the price of a 10½-year 1 per cent bond on a 1.40 basis.

In other words, this is simply interpolation between the different prices, in the first case as to basis, and in the second instance as to maturity. A third way is as to coupon rates.

For example, the price of an 11-year 1 per cent bond on a 1.30 basis is 96.93. The price of an 11-year 2 per cent bond on a 1.30 basis is 107.15. Those two prices added together and divided by 2 result in 102.04, which is the price of an 11-year 1½ per cent bond on a 1.30 basis.

In recent years there has been an increasing number of odd interest rate bonds. For example, one might have a bond with a 1.10 per cent coupon. Although recently basis books have been published furnishing figures for such odd amount interest rate bonds, many of the older books do not include figures for such rates. However, by interpolating, in this case by proportioning the difference between two prices found at a given basis, one for a lower coupon rate and one for a higher coupon rate (for example, using 1 per cent and 1¼ per cent coupon rates in the case of a 1.10 per cent bond), the desired price at any given basis may be determined.

Similarly, bonds may be offered at dollar prices which are not included in the basis book. By interpolating, the basis may be determined. Also,

if an odd basis is not given in the book, by interpolating, the dollar price may be determined.

In the present market, with short-term rates lower than long-term, early maturities will sell at lower yields than do longer ones. As municipal issues are usually in serial form, this results in offering current issues at what is known as a *scale*, in which there are low yields on the early maturities running to higher yields on the longer maturities.

In some money markets (which have not been seen in a good many years) that scale might be reversed. This was true in the 1920's when money rates were high. The early maturities were sold on a 4 or 5 per cent basis, and the basis decreased as the maturity lengthened. Of course, the reason for this is that when money rates are high, the tendency is to buy long-term bonds in order to invest money at the prevailing high rate for as long as possible. Consequently there is a demand for the longer maturities, driving them to a relatively higher price or lower yield. In a market like the present, many investors do not like to invest their money for long periods at these rates. Therefore there is a demand for the short maturities on the basis that it might be possible to reinvest at higher yields in the future.

PROCEDURE OF MUNICIPALITIES IN THE ISSUANCE AND SALE OF BONDS

The authority for the issuance of municipal bonds stems from the constitution of the state or statutory authority. In some cases it may be necessary for a municipality to obtain a vote of its electorate in order to issue and sell bonds. Depending upon the law, a majority vote may be sufficient or a two-thirds vote may be necessary. In other cases, the administrative officials may have the power to issue bonds without any vote of the people. At times we will find an issue to be an unsold portion of a larger issue which had been previously authorized, but which was to be issued over a period of years.

A very important feature of an issue is the maturity. This depends to a large extent on the purpose of the issue. It is one of the important rules of sound municipal financing that no bond should run beyond the life of the improvement. The life of the improvement in some cases is determined and spelled out in the law. In other cases, it is not. It is clear, however, that a brick court house might have a longer life than a new road, and for this reason the law usually indicates how long a bond issue may run for a given purpose. In some states, the length of maximum life of the bond is stated in general terms in the law without regard to the purpose. In such cases, the administrative officials determine the maturities within the limitation prescribed by law.

The month of maturity is also important. In a good many cases, the month of maturity is simply determined by the day on which the bond is sold. If the bonds were sold on April 12, they probably would be dated May 1 or April 1 and the maturities would be the same month. While it is customary to have bonds mature in the same month in which they are dated, this is not necessarily so. The date of issue, of course, is the date from which interest begins to accrue.

A bond might be dated April 1, and its month of maturity might be May or some other month. That is frequently done in Ohio where there are various datings, but the bonds are usually due in either April or October. The reason for this is that the time of the year when a municipality's funds come in varies. In some states taxes may be collected only once a year. In other states, they may be collected semiannually, and in some quarterly. Thus, there are certain times of the year for each municipality when it is in funds and other times when its funds are low. Therefore, the maturity date is scheduled so that the municipality will not be faced with a large amount of bonds coming due each year at a time when funds are not on hand to pay them.

INTEREST RATES

The next thing that must be determined is the interest rate. In former years the interest rate was usually set prior to the bidding, and that sometimes caused complications in a fluctuating market. The municipal officials might think they could sell 4 per cent bonds; however, if the market went down they would get no bids. Therefore, in order to avoid such occurrences, the custom began to grow of permitting the bidder to name the interest rate. That has a distinct advantage, and, under present methods of sale, really no disadvantage.

The bidder usually prefers to keep the premium down to the lowest possible figure. Thus, if the bidder is permitted to name the rate, he is going to name the lowest rate which is compatible with the market at the time of the sale. The result is that the coupon rate which the municipality has to pay is kept down and also large premiums are eliminated.

In recent years it has become quite general practice, as we may note in the advertisements of the new issues, to permit *split* interest rates. In other words, there may be two or more different rates on the same issue. The reason for this is that a bid for all 2 per cent bonds might produce a large premium in which event a combination of 2 per cent, 1½ per cent, and 1¼ per cent rates would produce a bid of approximately par and permit a reoffering at only a reasonably small premium.

In setting up a split-rate issue, the higher coupon is on the shorter maturities in practically all instances. The reason for this is that on

the shorter maturities the premium is much less than on the longer maturities. Thus, it is possible to have 2 or 3 per cent bonds due in one or two years at a fairly reasonable premium, whereas, if there were 2 or 3 per cent coupons on the longer maturities, the premium might run up to 14 or 15 points.

Also, in determining which is the better bid it is customary to compare bids on the basis of net interest cost, which means that, as between two bidders, the municipality figures by a straight rate how much money it will have to pay on each proposal. In other words, on a bid for 2s and $1\frac{1}{2}$ s, the municipality will compute the amount that is going to be paid out in principal and interest on the issue over its life, and compare that with a competing bid or bids which might be for 2s, $1\frac{3}{4}$ s, and $1\frac{1}{2}$ s. After the total amount of interest is computed, any premium that may be bid is subtracted, and the net result is what is known as the *net interest cost* to the municipality. Whichever bid figures the lowest net interest cost is considered the best bid and generally gets the award.

REQUEST FOR BIDS

After the details of the issue have been determined, the next step a municipality should take is to advertise its bonds for sale. A definite date is set in almost all instances of large financing. The municipality will frequently check with one or more of the representative houses to determine whether the date that they have in contemplation appears to be satisfactory, or whether there is some conflicting sale or other occurrence which might make that date inadvisable. After that is done the issue is advertised for sale. It is usually required to be advertised in a local paper, and possibly in some trade paper, such as the *Daily Bond Buyer*.

It is also customary to prepare official notices of sale, giving the description of the bonds, the amount of the issue and the various details such as maturity, the interest rate, whether or not more than one interest rate can be bid, and if so, whether there is any limit to the size of the rate that can be stipulated. Then there is also the financial statement, and in a good many cases the official proposal for the bonds is included. These notices are usually sent to all the representative houses who might be interested in bidding on the bonds.

The *Daily Bond Buyer* is of great importance in municipal bond work and practically every house that is dealing actively in municipals subscribes to it. It is published every day, with a weekly edition on Saturday that contains everything that the daily contains.

Omitting the ads by dealers and the news items, and so forth, it consists of three or four sections. In the first place, there are the official ads

of the municipalities. These are paid ads, and it is usually required by law that a new municipal issue be advertised, sometimes in a local paper, but usually in some paper that reaches the bond trade, which, in most instances, means *The Bond Buyer*. Thus, if it is required that it be advertised in New York City, that is usually the medium through which it is advertised. Under *Proposed Bond Issues* are listed issues which have not definitely been authorized or advertised for sale. Under *Sealed Bids Invited*, the issues for which a definite sale date has been determined are listed. There are also sections devoted to the *Results of Bond Sales*, and to a *Calendar of Sealed Bid Openings*.

LEGAL OPINIONS

It is customary in bidding on municipal bonds to bid subject to what is known as a satisfactory or marketable opinion. A number of firms of attorneys in the United States specialize in municipal law exclusively or have a department that does so, and it is customary in bidding on municipal bonds for dealers to bid subject to the bonds being accompanied by an unqualified approving opinion of some such firm that the bonds are legally and regularly issued.

It is generally the practice for the issuing municipality to secure, before the bonds are offered for sale, the services of a firm of bond attorneys whose opinion is marketable. The municipality is generally better off and the sale and delivery facilitated when it engages the services of such a firm of municipal attorneys in advance of the offering of the bonds. The attorneys will direct the preparation of the necessary resolutions and the notices for publication, and otherwise supervise the many legal technicalities incident to the offering and sale of the bonds.

The other procedure is simply to offer the bonds without a legal opinion, in which event it is almost invariably the practice of bidders to bid subject to the bonds being approved by a firm of municipal bond attorneys of their selection, the dealer agreeing to pay the expense. In this case, the cost of the legal opinion is practically always taken into consideration in the bid which the dealer makes to the municipality. Thus, in the final analysis the municipality stands the legal expense. Further, if the attorney is paid by the dealer, the attorney does not come into the picture until after the bonds have been sold, in which case an error might be found, subsequent to the sale, sufficient to prevent approval of the issue. In that event, since the bid was made subject to an approving opinion, there is no sale and the municipality must go through the entire process again. Consequently when a bond house is asked for advice, it is usually the practice to recommend strongly that the municipality obtain the opinion or the services of a municipal attorney prior to the sale.

BIDDING PROCEDURE

On the date of the sale, the municipal officials usually meet in a body at the stipulated time and receive the bids from the bidders in person or through the mail. It is customary to require from each bidder a good-faith check ranging in amount from 1 per cent to 5 per cent of the par value of the bonds being sold or of the amount bid.

Usually, the bid showing the lowest net interest cost to the issuer is accepted. That practice is followed where there are split-rate bids and is also generally followed where bids vary as to rate for a single coupon for the entire issue, such as separate bids for, say, $1\frac{1}{2}$ s, $1\frac{3}{8}$ s and $1\frac{1}{4}$ s. If all bids are based on the same coupon rate for the entire issue, it is a simple matter; whoever bids the highest premium usually gets the award. When the sale is over, the unsuccessful bidders' good-faith checks are returned to them and the successful bidder's check is retained by the municipality until the contract is completed, or it is cashed as liquidated damages in the event the bidder does not fulfill his contract and fails to take up the bonds at the time they are ready for delivery.

It is customary to receive sealed bids at the vast majority of municipal sales. However, there are occasions when the municipality receives auction bids. In some instances, as when bidders force each other up, the municipality gets a better price if it sells bonds at auction; however, this is not always the case. A bidder may go to a sale with a limit of $105\frac{1}{2}$ for an issue that is being sold at auction, but if his competitor quits at 103, and he buys the issue at 103.01, which is almost $2\frac{1}{2}$ points under what he was willing to pay, the municipality has lost.

PROCEDURE OF BOND DEALERS IN PURCHASING MUNICIPALS

Some years ago, many municipal issues were sold privately. Some of the houses had men traveling around the country just looking for bond sales in connection with which they could arrange a private deal. At present, both by custom and because of changes in the laws, it is very seldom that we have private sales of general obligation municipals. In practically all instances, the law requires competitive bidding, usually by submission of sealed bids, although a few states permit private sales despite diligent efforts to pass remedial legislation.

The first step which the dealer takes is to go through the sealed-bid column of the *Daily Bond Buyer*. Some dealers are interested in certain types of issues, or in issues from certain sections of the country. In any event, they go through the sealed-bid columns and in practically all cases the dealer keeps a record of coming sales in which he may be interested. So the first procedure is to put down in the diary any new issues which have been advertised for sale on a definite date so that, as that date comes along, the dealer may have a reminder of the sale.

The dealer's next step is to decide whether the size of the financing is such that he requires partners or whether he is going to bid alone. That brings up two situations. In the event that a dealer has previously bid in joint account on a bond of the same municipality, that same account will generally function again. In the municipal business, joint accounts are, to a great extent, historical. For instance, the same houses that joined in bidding on City of Minneapolis this year will join in bidding on City of Minneapolis next year and the year after. Changes in the makeup of accounts may, of course, occur if houses go out of business or decide that they do not want to handle a certain bond; however, once a house is included in a joint account for any given issue, that house can consider that it may generally be included in that account as new issues come along.

If the dealer were one of the managing houses in such an account, he would consult his records to determine who was bidding with him on the last issue of that municipality. He will then get in touch with those dealers and be sure that they are ready and willing to come along on any new issues. If for any reason they do want to withdraw at that particular time, they will drop out, but they generally have the privilege of joining the account if they have been in it before.

FORMS OF ACCOUNT

If the issue is such that it is decided to have a joint account to bid on it, the next step taken by the manager is to form the account. There are two principal forms of joint account in municipals. One is the so-called eastern or undivided account. The other is what is usually known as the western or the divided account.

In the case of the eastern or undivided account, the account is said to be undivided as to selling and liability. By undivided as to selling is meant that all of the bonds of the issue are placed under the control of the manager of the account. Usually municipals are in serial form, and to divide them would mean that in some cases the various members would have very few bonds from any one maturity to work on. Therefore, it is much more practical to keep all bonds together, and if dealer A gets an order for bonds of 1949 maturity, and his order comes in first, he gets the bonds. If dealer B gets orders for some other maturity, he will get first chance at those, as long as they are available. Occasionally, there may be such a demand for certain maturities that the most satisfactory thing to do is to divide those particular maturities and prorate them among the members of the account; but with that exception all of the bonds are held together, and any member may obtain confirmation of those bonds as long as they are available. Of course they have to check

with the manager to be sure that the bonds of that particular maturity have not been sold.

Undivided as to liability means that as long as any of the bonds in the account are still unsold, each member of the account is liable for his proportionate share of the unsold amount. A dealer may have a participation of 25 per cent in a \$1,000,000 issue, so that, originally, his liability is the cost of \$250,000 of those bonds. After a few days, the issue might be sold down to \$500,000. He still will have a liability equal to 25 per cent of a half million dollars, even though he may have sold considerably more than his participation or may have sold none.

In the western or divided account, the selling is usually undivided as it is in the eastern account. In other words, the bonds are held together just as they are in the undivided account. However, the principal difference is that in the western account the liability is divided. If a dealer has a \$250,000 participation in a \$1,000,000 issue, in a western or divided account, his liability ceases as soon as he has sold \$250,000 worth of bonds. He can still continue to sell against the bonds in the hands of the manager, and often it is arranged that if a dealer has sold his participation, he will be paid an extra selling commission for what are called over-sales. In other words, in making over-sales a dealer is helping someone else reduce his liability; but this is distinctly different from the undivided account in that in the western form of account a dealer can sell out his liability and thus be relieved of his commitment.

The accounts are usually set up to run for thirty days. Sometimes they may run for sixty days, but it is customary for them to run for thirty days during which time the offering prices cannot be changed without the consent of all of the members, or at least the majority of the members. The group is bound by the offering prices which have been set at the time the bonds are offered. If, at the end of thirty days, the issue has not all been sold, the account can be renewed and extended for another period of thirty days by mutual agreement, or if all of the members (or a majority interest of partners, if specified, in the original account) do not wish to extend the account, the remaining bonds in an eastern account are divided up among the members in accordance with their pro-rata share based upon their original percentage.

PROCEDURE AFTER ACCOUNT IS FORMED

After the account has been set up, a form letter is usually sent out to the municipal officials requesting an official notice of sale, which in a great many cases contains an official bidding form. If no bidding form is furnished, of course, it is necessary to prepare one, but in a great many cases such a form is part of the official notice of sale.

In the past, most of the houses sent out a questionnaire which was quite elaborate, covering practically all of the material which would be needed in the way of statistical information. In recent years, however, a great many of the houses have stopped sending out those questionnaires, since the Dun and Bradstreet service contains practically all of the information which is requested on the questionnaire form. This service, in addition to periodic reports on the important situations, gets out a report on each important sale a few days prior to the sale. Thus, the correspondence with the officials is usually confined to requesting the notice of sale and asking any specific questions which may come to mind that are not covered in the information that is at hand.

In a border-line case, it may be necessary to send someone to the municipality to interview the officials and get more detailed information than is usually required. In most cases, however, it is possible to determine whether or not it is desirable to bid from the information on hand; and, of course, on many issues, very little research is necessary unless there has been some drastic change in conditions in a particular locality.

A few days before the sale, it is necessary to decide on the offering prices at which the bonds will be offered to the public. If the house is bidding alone, usually the municipal bond traders, if there are more than one, will each make up scales and discuss them. From the various ideas will evolve one scale of prices which seems to be about in line with the market and about where it is thought that the bonds can be sold. In a joint account, each house sets up its own ideas as to the offering scale. The account manager calls a meeting, usually the day before the sale, and representatives from each of the members of the account attend with their ideas as to the prices at which the bonds should sell. These may be very close together or they may cover a wide range, in which case considerable discussion is necessary. If the scale which is finally agreed to is higher than some of the houses are willing to go, they have the right to drop out of the account and their share is usually divided among the other members.

After the scale has been decided upon, it is necessary to convert the scale to dollar prices, to multiply those dollar prices through by the number of bonds in each maturity and divide by the total amount of the issue, to arrive at the average selling price. After the average price is determined, the dealer's spread or margin of profit is deducted and the resultant price is bid for the bonds.

After the price has been set, the next step is to submit the bid to the municipality. This may be done in any one of several ways. Sometimes the bid is mailed. Although this may be satisfactory in connection with small issues, it is infrequently done now because most dealers do not like

to have a bid standing overnight. Usually on an important sale, the bidder will either send one of his own men as a representative to attend the sale or will arrange to have a local dealer or a local bank submit the bid for him. In that case, the dealer will call either his local representative on the ground or the local bank or dealer who is submitting the bid, and give him the bid over the telephone. This is filled in on the bidding blank and then submitted to the municipality.

There is very strict observance of the deadline in municipal sales. If the sale is scheduled for 3 o'clock in the afternoon, for example, and a bid arrives at 3:05, that bid is not considered.

REOFFERING

For the bidder who purchases the bonds, the next step is to reoffer them, usually at the scale which has been decided upon prior to the bidding. In some cases there may be some slight alterations in the scale, depending on how the bidding goes; but ordinarily the scale that has been decided upon is used.

The bonds are offered at basis prices with few exceptions. Sometimes the longer maturities may be offered at a dollar price. From the offering prices there is allowed to other dealers what is known as the dealer's concession. On a new issue this concession may range from no concession at all on the first or the first two maturities to possibly $\frac{1}{4}$ or $\frac{1}{2}$ point or more on the longer bonds. In other words, if the syndicate is offering a new issue of municipals, and some dealer who is not in the syndicate gets an order for those bonds, he will take them down from the syndicate at the offering price less the concession, and then sell them to his customer at the offering price, his profit being the amount of the concession.

In addition to the concession, the members of the account take bonds down at the offering prices less what is called the take-down. This is generally more than the dealer's concession because a member of the account may sell bonds to another dealer. For instance, if the concession is $\frac{1}{8}$ to dealers, the take-down on those particular maturities may be $\frac{1}{4}$. Thus, the member of the account that takes down bonds from the account at the offering price less $\frac{1}{4}$, and sells them to a nonmember dealer at the offering price less $\frac{1}{8}$, makes $\frac{1}{8}$ of a point on the transaction. On the long maturities, the take-down may be $\frac{1}{2}$, out of which the members of the account are permitted to realow $\frac{1}{4}$. That concession goes only to dealers or to banks with bona fide bond departments. The net profit over and above the take-down which the participating dealers receive goes into the account and is divided among the various members at the termination of the account.

ADVERTISING

In offering an issue, it must be decided whether or not it is to be advertised in the paper. This depends on the size of the issue, the margin of profit, and so forth. In a municipal ad, it is customary to put the manager's name in the upper left-hand corner. That is, the manager's name will be the first name in the first line of names reading from left to right. If several houses have the same participation, the position of their names is determined by agreement. If the participation is different, the order of names is in order of participation and the order of names in the ad proceeds from left to right, on the first line, and then from left to right on the second line, and so forth.

OFFERING CIRCULAR

As soon as the bonds have been bought, the offering houses prepare an offering circular, most dealers following about the same form.

If the issue has just been purchased at public sale, it is customary to put *New Issue* in the upper left-hand corner. Sometimes a block of outstanding bonds may be bought from an insurance company or from some other dealers in the market. In that case, the upper left-hand corner of the circular is left blank or there may be a notation that *this is not a new issue*. Then certain details are set forth, namely, the amount, the name of the bond, the coupon rates, and so forth. In small type under the date, the interest payment dates are always indicated as well as the place of payment.

The circular also states the denominations of the bonds and whether or not they are coupon or registered bonds and, if the former, whether registerable either as to principal, interest, or both. The statement as to tax exemption is included, and if the bonds are qualified as legal for investment by savings banks and trust funds, that fact is stated, naming the principal states in which this is true.

FINANCIAL STATEMENTS

It is customary in putting the financial statement on a circular to give the official figures. Those figures are usually contained in the official notice of sale over the name of one of the municipal officials. If for some reason they are not in the notice, they are obtained, preferably over the signature of some qualified official.

Included in the figures are the assessed valuation and estimated actual value of the property in the municipality.

If property is bought for \$10,000, assuming that it is bought from a willing seller and it is not a forced sale, the actual value of that property is \$10,000. It may be carried for assessment purposes on the books of the city at \$8,000. \$8,000 in this case represents the assessed valuation.

The estimated actual value as shown on a municipal circular is then, theoretically, the sum of the value of all the properties in the municipality. Obviously, there are only comparatively few actual sales of property within the short space of time of preparation of the circular, so that figure is usually an estimated figure; but that is what it is intended to represent. It is intended to be the actual sale value of taxable property in the municipality as estimated by the municipality.

The assessed valuation, on the other hand, would be the sum of the figures carried on the municipality's books of the value at which the various properties are assessed for tax purposes.

In lieu of any actual dollar figure which might be furnished by the municipality for estimated actual value, it is possible to make such an estimate on the basis of the percentage at which property is assessed, whether it be at 100 per cent, 80 per cent, 60 per cent, or some other percentage. For instance, in New Jersey and in New York, property is supposed to be taxed at 100 per cent of actual value. In practice that does not necessarily follow, but in both New Jersey and New York it is found that the assessed valuation and the actual value are pretty close to each other. On the other hand, in some of the southern states particularly, it is the practice to assess property at a very low figure.

There is no rule of thumb that can be followed in verifying the accuracy of the stated actual value. However, one may divide the population into the estimated actual valuation, and if an actual value per capita of somewhere between \$1,000 and \$1,500 results, the estimate may be considered reasonable. If a municipality shows an actual value as high as \$4,000 or \$5,000 per capita, one should be inclined to be skeptical of the estimate, at least until the situation is investigated.

Of course, the actual value per capita will vary in accordance with the type of community. A wealthy suburban community may very well have an actual value per capita of around \$2,000 or \$3,000. But if a community with medium grade improvements without any very large industries shows an actual value considerably in excess of \$1,000 or \$1,500, it would seem that that estimate is a little high.

HOMESTEAD EXEMPTION

Some states have what is known as a *homestead exemption law*. This is an exemption up to a certain point on the taxable value of residential property which is occupied by the owner. For example, in Oklahoma there is a \$1,000 homestead exemption from taxes. The owner of a residence in Oklahoma which is assessed at \$7,000 is exempt from taxes on the first \$1,000 with this exception: the exemption does not apply to any service debt that was incurred prior to the passage of the *Homestead Ex-*

emption Act. Bonds which were issued prior to the act would be payable from taxes based on the full assessed valuation; otherwise, there would be a breach of contract with the bondholders, because the early issue of bonds were issued with the understanding that all property would be taxable for their payment. Bonds which have been issued subsequent to the passage of a homestead exemption act, however, would be payable from the taxes on property after excluding homestead exemptions because that law was on the books before these later issues were issued and the bondholder presumably was on notice that that was the case.

TOTAL AND NET BONDED DEBT

The next figure in the statement is the total bonded debt which means the total long-term debt represented by bond issues outstanding. That includes bonds for whatever purpose so long as they are general obligations of the municipality. It would not include bonds payable from some special source of income solely, such as assessment bonds which are payable only from assessments against the benefited property. The bonded debt means that debt payable from general taxes and any other bonded indebtedness for which the municipality is either primarily or ultimately liable.

In arriving at the net bonded debt, it is permissible to deduct from the total bonded debt the debt of self-supporting operations such as water and other utilities. There may also be deducted the sinking funds for other than self-supporting debt. Obviously if the self-supporting debt is deducted the sinking funds which are applicable to it should not be deducted.

Under the law governing investments for savings banks in New York State, there is a restriction on the percentage of net debt which certain municipalities may have and still have their bonds eligible for such investment. In arriving at the net debt under the New York Savings Bank Law, which is often followed in circulars, it is permissible to deduct only self-supporting water debt and sinking funds other than water debt sinking funds. In Massachusetts and Connecticut, however, the Savings Bank Law permits, for the purpose of determining eligibility for such investment, the deduction of certain self-supporting debt other than water debt.

As pointed out, in making an analytical examination of a situation and in preparing net debt statements, it is possible to deduct more than self-supporting water debt, as frequently there is other self-supporting utility debt outstanding and there may be a self-supporting sewer debt.

After making those deductions, the net bonded debt is determined. That is the debt for which taxes must be levied. The self-supporting

debt, of course, by the definition of self-supporting, takes care of itself without the levy of ad valorem taxes.

OVERLAPPING DEBT

In addition to the direct debt against the municipality, there is what is called overlapping debt for which the same property is taxable. For example, there might be a school district which has bonds outstanding, as well as the county in which the municipality is located, the debt of both units being payable from taxes levied against the same property which is paying taxes to the municipality. In making a complete analysis, it would be necessary to include the City's proportionate share of that overlapping debt. The overlapping debt usually has to be an estimate, since the exact figure can seldom be obtained from the municipal officials. While a figure may be obtained which is close enough to answer the purpose in determining the approximate burden, it is not sufficiently accurate to put in an offering circular. Therefore, the custom is to state the direct debt and include a footnote stating that *the foregoing financial statement does not include the debt of any other political subdivision having power to levy taxes on the taxable property in the city of Blank.*

FLOATING DEBT

Another type of debt, which is not usually included under bonded debt, but which may be a burden against the same property, is floating debt. Floating debt may be of various kinds. The most common type of floating debt is tax anticipation notes which may be issued to tide a municipality over until its current taxes come in. That is not ordinarily taken into consideration in figuring debt burden, because it will be liquidated during the year. A short-term loan is liquidated from current taxes as they come in. On the other hand, there may be bond anticipation notes, or some other type of note outstanding which has been outstanding for a number of years and may be outstanding for several more, and will probably eventually have to be included in some year's budget. In that case, it is as much a debt or a burden on the municipality as are its long-term bonds. For that reason, if there is floating debt of that character, it is usually mentioned in the footnote as well.

TAX COLLECTIONS

The next item is tax collections, which reflects the manner in which the taxpayers of the municipality are paying their taxes. During the early 1930's when many municipalities were experiencing difficulty in the collection of taxes, the delinquency in some cases was as much as 25 or 30 per cent. In most cases, at the present time the tax delinquency figures are very low.

The next paragraph in the circular usually contains the purpose for which the bonds are issued and also a recital of the security behind the bonds. The latter takes the form of a statement as to whether or not the bonds are payable from unlimited ad valorem taxes. If there is a tax limit, that should be stated. If there is any unusual type of security, such as some secondary source of revenue which may be used to pay the bonds, that also should be stated. For instance, in the case of water bonds that are payable primarily from water earnings, with the additional security of ad valorem taxes, that additional security would probably be mentioned.

Then the maturities and prices and yields are set forth. And, since the question is practically always asked as to whose legal opinion is furnished, the name of the firm of attorneys is usually included on the circular.

METHOD OF PAYMENT

When the bonds are ready for delivery and the municipal attorneys have signified that they are ready to render their final approving opinion, the individual dealer who is buying the issue, or the group which is buying it, makes payment to the municipality. If a dealer bank heads the issue, the bank puts up the money for the group. If a dealer is buying the issue for himself, or is heading the group, he will usually arrange for a loan at one of the banks, simply putting up whatever margin is required. The margin may be 5 or 10 per cent, depending on the type of issue. By carrying the bonds at a bank, the dealer has to put up a comparatively small amount and is able to handle a good many more issues. As the bonds are sold, of course, he pays down the loan until it is eventually liquidated by the ultimate sale of the entire issue.

Bonds are sold plus accrued interest, either from the date of the issue, which is usually the case in the instance of a new issue, or from the last interest-paying date if one has passed. The reason for the payment of accrued interest is, of course, obvious. The purchaser is only entitled to interest from the time he makes payment and the previous owner is entitled to it up to the time he receives payment.

In the case of a municipality's selling an issue, the bonds might be dated April 1 and the purchaser receive delivery and make payment on May 1. The municipality has not had the use of that money for one month after the date of the issue and, therefore, is paid accrued interest for that period. The purchaser of the bonds collects accrued interest from the parties to whom he sells them. The investor in turn receives the full amount of the interest payment on the date it becomes due. He

in turn, however, had previously paid the interest accruing up to the date of his purchase.

Occasionally bonds are sold flat, which means that no accrued interest is paid. That occurs in the case of a bond which is in default. As the payment of interest is problematical, the purchaser is not willing to pay the seller accrued interest, as he in turn may not receive his interest payment.

THE SECONDARY OR TRADING MARKET

Although dealers are continually bidding on new issues, they naturally are only successful in purchasing a comparatively small percentage of the bonds that they bid on. Therefore, a very large portion of their business consists of over-the-counter trading in outstanding issues with other dealers, institutions, or individual investors.

For this purpose the *Blue List* is of very great value, and any house interested in municipals is likely to subscribe to this service. The list is self-explanatory, and simply provides a means whereby municipal dealers may list their current offerings.

While the *Blue List* does not show all the bonds which are in the market, as far as dealers are concerned it represents the very great majority of the floating supply. That is not so in the case of bonds held by dealer banks, because very frequently they have bonds in their portfolios which from time to time they put on their offering sheets. Thus, we cannot get a very good indication as far as that source is concerned as to just what the floating supply is. The majority of dealers, however, show on the *Blue List* the bonds which they have.

It is interesting to note at this point the high standards which are observed in the municipal bond business. Millions of dollars' worth of bonds are bought and sold every day simply over the telephone. One dealer might call another and ask for a bid on \$1,000,000 of bonds. The bidder will give the bid over the phone. If accepted, it is an iron-bound contract, and for the dealer to welsh on a bid of that character is unknown, whether the market goes against him or not before delivery.

SOURCES OF STATISTICAL INFORMATION

There are several methods of obtaining statistical information in regard to municipal issues.

As far as new financing is concerned, there are several important sources of information. There is a questionnaire form which is sent out to the officials which is not too satisfactory because municipal officials see so many of these that they are rather dilatory about filling them out. Also any specific information which may be desired may be obtained by

direct correspondence. The Dun and Bradstreet reports, however, comprise the principal source of information on new issues at present. Moody's and Standard and Poor's also have valuable services.

On new financing, Dun and Bradstreet is used probably more than Moody's. Dun and Bradstreet, in addition to periodic reports on most of the major situations in the country, get out a special report on each important municipality prior to its coming into the market with a sizeable new issue. These reports contain practically all the information which would be requested on the questionnaire and have, therefore, to a large extent taken the place of questionnaires.

Moody's *Governments and Municipals* contains a detailed statement of outstanding bond issues, with their maturities, the principal tax sources, and the various laws in the various states applying to municipal issues. It is extremely valuable when bidding on bonds of some municipality that has not been in the market for some time and on which there is no recent Dun and Bradstreet report available, since it is possible to find a statement in Moody's on practically any municipality. While the information found there may not be entirely up to date, because Moody's manual comes out the first of each year, there is a bi-weekly service which supplements the manual and which keeps it pretty well up to date. It contains any recent statistical information which is available on debt statements and so forth. The principal difference between Moody's and Dun and Bradstreet is that Dun and Bradstreet goes into much more detail on current and new situations but covers fewer municipalities. Moody's goes into more detail as to the various outstanding issues and covers practically every municipality.

In a few states there are local organizations such as the Ohio Municipal Advisory Council, the Municipal Advisory Council of Michigan, and the North Carolina Municipal Council. These organizations were formed, and are maintained, by dealers in municipal bonds for the purpose of examining and studying the financial status of municipalities within their respective states and other matters bearing on the credit position and securities of such municipalities. These organizations maintain a staff for this purpose and are a central place for compiling essential information. This is disseminated through their members and at times direct to others. These organizations render a valuable service to local municipalities and to investors as well as to the municipal dealers who support them.

REVIEW QUESTIONS

1. Define and distinguish between (a) "operating expenses," and (b) "capital expenditures."
2. For what general purposes are municipal bonds issued?

3. Why do municipal bonds usually sell at a lower yield than federal government bonds of like maturity?
4. From an investment dealer's viewpoint, what is included in the term "municipal"?
5. Define: revenue bonds; general obligation bonds; territorial bonds; special assessment bonds; benefit bonds.
6. Distinguish between limited and unlimited tax bonds.
7. What is the authority for the tax-exempt features of housing authority bonds? Territorial bonds? State and municipal bonds?
8. What groups of security customers are the principal buyers of municipals?
9. What are the usual channels in the distribution and sale of municipal bonds?
10. What are the functions of a municipal bond dealer?
11. What are the functions of a "dealer bank"?
12. What important limitation is placed on the type of municipal bonds a dealer bank can handle?
13. What considerations require the careful selection of the printer for municipal bonds?
14. In computing bond yields, what is meant by interpolation?
15. Why are municipal bonds generally sold on a yield basis in contrast with the usual practice of selling corporates on a dollar basis?
16. What is meant by the term "price scale"?
17. Under what economic conditions would short-term securities be offered at higher yields than long-term securities? Under what economic conditions would short-term securities be offered at lower yields than long-term securities?
18. What authority is required for the issuance of a municipal bond?
19. What factors must be considered by the investor in deciding whether the length of life of the bond issue is economically sound?
20. What factors are considered by the municipality in determining the month of the maturity and the month of the interest payment dates?
21. What is the primary consideration of a bidder in setting the interest coupon rate?
22. What are "split interest rates"?
23. In setting up a "split interest rate" issue, is the higher coupon placed on the shorter maturities or on the longer maturities? Explain.
24. How is the successful bidder for the municipal issue determined when the bids submitted are for split interest rates?
25. What steps are usually taken by a municipality to secure bids for a proposed issue?
26. What important information is printed in the *Daily Bond Buyer*?
27. Describe the normal bidding procedure.
28. What procedure is followed by municipal bond houses in keeping informed of forthcoming bids?
29. Define and distinguish between undivided, or "eastern," and divided, or "western," forms of joint account for bidding on municipal issues.
30. For what length of time does the agreement among purchasers generally extend?
31. What procedure is generally followed by underwriters in determining the price at which bonds will be offered to the public?

32. How does a syndicate normally arrive at the price which it will bid for a bond issue?
33. What are the mechanics of submitting a bid by a syndicate?
34. What is a "dealer's concession"? How is it determined?
35. What is a "member's take-down"? How is it determined?
36. How are the names of houses arranged on an ad offering the issue?
37. What information is included in an offering circular?
38. What rule of thumb may be used to check the reasonableness of the per-capita property valuation of a municipality?
39. What is a "homestead exemption"?
40. How is the net bonded debt of a municipality computed? Are sinking funds on self-supporting debts deducted? If not, why?
41. What is an "overlapping debt"? How is an "overlapping debt" computed for a municipality?
42. Define "floating debt." How does it come into existence?
43. What is meant by the term "bonds are sold flat"? Under what circumstances does this occur?
44. What financial procedure is normally followed by a dealer and syndicate in paying the municipality for the bonds purchased?
45. What information is published in the *Blue List*?
46. What are the principal sources of statistical information on new municipal financing? On outstanding municipal bond issues?

MUNICIPAL SECURITIES *(Continued)*

by H. C. Taylor, Assistant Cashier, Chase National Bank

ANALYZING MUNICIPAL CREDIT

The following is an outline of the factors to be considered in analyzing municipal credit. It will be noted that this outline is in rather full detail and, obviously, in examining an issue it might not be necessary to consider every point mentioned in the outline. However, it covers practically every type of information which might be required and is intended as a general guide. Immediately following the outline are comments on the various headings included therein.

A. Character of community:

1. Moral responsibility: historical background of community and attitude toward debt in the past as indicating whether taxpayers in times of stress are likely to exert every effort to maintain municipality's credit or are likely to seek compromise from creditors.
2. Debt-paying ability: whether average wealth of community is above or below that of similar communities.
3. Type of activity on which municipality's prosperity is dependent: whether well diversified or based to a large degree on one industry or on industries whose activity is subject to wide fluctuation, depending on general economic conditions; whether reasonably permanent or subject to the risk of future decline caused by shifting whims of the public or depletion of natural resources such as exist in the case of resort communities or those largely dependent on coal or oil production.
4. Character of officials.
5. Condition of local banks.
6. Size of community and amount of debt outstanding in hands of the public, as affecting:
 - a. Marketability.
 - b. General interest in event of default, and so forth.

B. Debt:

1. Relationship of total debt burden to population and estimated actual valuation (total debt burden means direct local net debt plus any other debt for which local property is taxed, such as overlapping district debt, proportionate share of county debt, and so forth).
2. Debt trend as indicated by whether or not municipality's debt has been progressively increasing or progressively decreasing in recent years.

3. Schedule of debt service requirements (principal and interest, except principal of sinking fund bonds) should show a declining trend to allow for requirements of possible new financing in future years. Debt schedule with abnormal peaks in certain future years may mean necessity of refunding some maturities, depending on market conditions, to meet its obligations at that time.
4. Relationship of annual debt service requirements to total annual revenues.
5. Contemplated financing by any local taxing units and prospective effect on:
 - a. Over-all net debt.
 - b. Debt service schedules.
6. Do all of municipality's bonds mature within estimated life of the improvement for which they were issued?
7. Floating debt: The accumulation of a large floating debt is likely to be source of embarrassment.
8. Adequacy of sinking funds for term bonds.
9. Provision for payment:
 - a. Are bonds general obligations of municipality or payable from some special source of revenue?
 - b. Are bonds payable from unlimited ad valorem taxes or is there a constitutional or statutory limit on the amount of tax which may be levied for debt service? If a limit exists, how close is debt service levy to it at present?
 - c. If bonds are general obligations, is there any secondary source of payment such as water or other utility revenues, and so forth? Do bonds have a definite lien on these revenues and to what extent do they cover debt-service requirements?
 - d. Is there priority of one issue over another with respect to the revenues from which they are payable?
 - e. Are debt-service funds segregated?
 - f. Is there a satisfactory legal limitation on the total amount of indebtedness which the municipality may incur?
- C. Current operations:
 1. Floating debt:
 - a. Is there a large accumulation of short-term debt, and, if so, what caused it and what are the offsetting assets?
 - b. If there is floating debt, has the trend in recent years been up or down?
 - c. Has there been any funding of floating debt in recent years?
 2. Revenue collections:
 - a. Percentage of current ad valorem taxes collected during year of levy.
 - b. Any priority in claim against tax collections as between local taxing units.
 - c. Provision of reserves or cushion in annual budget against anticipated delinquency.
 - d. Adequate penalties for nonpayment of taxes when due.
 - e. Regular holding of tax sales as provided for by law.
 3. Over-all tax rate:
 - a. Trend in recent years.

- b. How does it compare with that which the community has successfully levied in the past?
- c. How does it compare with that of similar communities?
4. Is there provision for some centralized budgetary control with power to curtail departmental expenditures if declining revenues indicate the possibility of a year-end deficit?
5. Must any year-end cash deficit be included in next year's budget?
6. Has municipality been following the policy of unnecessarily refunding a part of its annual maturities in order to keep the tax rate down?
7. Short-term financing for operating purposes:
 - a. Extent to which municipality is dependent on this type of financing in order to meet current needs.
 - b. Where this type of financing is resorted to and a portion of the notes issued against the levy of one year is carried over into the next year, does the amount of such carry-over show a rising or declining trend in recent years?
8. Is there any legal limit on the amount of tax which may be levied for operating purposes and, if so, is the present tax rate so close to the limit as to indicate the possibility of some future embarrassment in meeting operating expenses if assessed values decline or it becomes necessary to increase expenditures?
9. Do assessed values exceed the actual or fair valuation of local properties under current conditions?
10. Is there any state supervisory body with control of the financial practices of its municipalities?
11. Legal opinion.

COMMENTS ON FOREGOING OUTLINE

The first item under the character of the community concerns its moral responsibility, the historical background of the community, its attitude toward debt in the past.

Perhaps the principal criterion in connection with that subject would be, in the first place, whether the municipality has defaulted at any time in the past. If it has defaulted, the first thing that should be looked into is the cause of the default, because there might or might not have been mitigating circumstances. The worst possible cause of default would be bad faith, where a municipality is simply trying to take advantage of some loophole to escape paying bonds which it is perfectly capable of paying.

There is also the type of default which is due to factors beyond the municipality's control. For instance, in the last depression there were numerous communities which had their funds tied up in closed banks and had no possible way of getting the money with which to operate or pay their debt service. They therefore were forced to default. But that would not necessarily reflect on the good faith of the municipality, because there was no alternative other than to wait until the money was available.

Also, when a municipality has defaulted, the manner in which the situation was worked out gives an indication as to the good faith of the municipality. The question here is whether the municipality attempted to arrive at an unwarranted compromise with its creditors whereby the bondholders would take something less than was due them, or whether it made every effort to pay everybody even if such payment had to be delayed. There were relatively few instances in the entire country where municipalities compromised on principal. There were numerous cases where interest was deferred and there were other cases where interest was reduced because of the fact that the debt of the municipality was such that it could not meet the original interest charges.

DEBT-PAYING ABILITY

The next item concerns debt-paying ability. In considering this matter, there are various indices of wealth which are available either in the services or in census reports. These indices include such figures as the percentage of population making income tax returns, retail sales per capita, average monthly rental of dwellings, bank deposits, and so forth.

The matter of the type of activity on which the municipality's prosperity is dependent is quite important. The fact that a municipality is dependent on a single industry does not necessarily mean that it is going to have difficulty in meeting its debt. It is simply that there is a problem in such a city because of the fact that if that particular industry is depressed when industry generally is not, that municipality will likely be affected to a greater degree than municipalities in which there is greater diversification. Thus, it is logical for the investor to attempt to spread his risk by preferring, other things being equal, a municipality where there is a diversification of industry, so that if one type of industry is depressed, another one may be doing nicely and counteract it. Also, there are agricultural towns in areas which are dependent on one crop with the same attendant problems in the event of a crop failure.

With reference to the character of the officials, in a good many states state supervision of municipal finance is effective in many ways. However, we do hear from time to time of various instances of dishonesty, and while such occurrences may not actually result in a loss to the municipality, they are inclined to affect the market at least temporarily. Thus, it is important that the type of administration that the municipality has is not subject to too much criticism.

The strength of the local banks is important. As was noted, during the depression there were quite a number of defaults because local banks closed with municipal funds on deposit and the municipality had no money with which to meet its obligations. Thus, a strong banking situation is a very important factor.

The size of the community, from the standpoint of security, does not make any particular difference. A very small community may be a must better credit risk than a large community.

The relationship of total debt burden to population and estimated actual valuation will be discussed in connection with the debt statement form.

DEBT TREND AND SERVICE REQUIREMENTS

The debt trend, as indicated by whether or not the municipality's debt has been progressively increasing or progressively decreasing in recent years, furnishes a pretty good indication as to the fiscal policy of the municipality and as to what the future may hold for it. It may not be that the debt has reached undue proportions at the present time. But if it is clear that the debt has been progressively increasing for a number of years, even though it is not unduly high at the moment, the circumstances should be closely examined. It may be the result of certain developments or it may be that the officials are not conservative. Also, one important point which should be considered in examining the debt trend is the comparison of the current debt with what it was around 1930 and 1931. If a municipality weathered the storm of the early 1930's when a good many of them had trouble and the debt since then has decreased so that it is now at a lower point than it was then, that municipality is probably in a pretty good position to withstand any other financial adversity which may come along. If, on the other hand, the debt has increased since 1930 and 1931, and the municipality had difficulty paying the debt it had at that time, that might be a danger signal.

Item B, 3 refers to the schedule of debt service requirements for the municipality. In most of the reports put out by Dun and Bradstreet and other statistical services there is usually a column showing the amount of principal coming due each year. The amount of interest due each year may also be given. If the amount of principal which comes due each year is the same, the total debt service is going to decline because as bonds are paid off the interest requirements will be decreased. That is desirable because it enables the municipality to issue new debt for the purpose of meeting future requirements without increasing its debt service beyond desirable levels. Also, in examining debt schedules, if we find one year with a very large maturity which is half again as large or twice as large as the normal year and for which sinking funds are not being set up, it is pretty certain that the municipality, when that year comes along, will be forced to give serious consideration to refunding a portion of that maturity in order to prevent raising the tax rate to abnormal proportions.

As far as the relationship of annual debt service requirements to total annual revenues is concerned, there is no rule of thumb that is entirely satisfactory. However, if the total debt service requirement begins to run much above 25 per cent of the annual budget, it may be considered rather high. Debt service requirements are a fixed charge and if, for example, in an annual budget of \$1,000,000, a half million dollars is provided for debt service and a half million dollars for operating expenses, and the revenue collections in that particular year decline 10 per cent, or \$100,000, that \$100,000 deficit is going to apply against the amount provided for operating expenses since the debt service must be paid. Thus, if there is a 10 per cent delinquency where there is a 50 per cent debt service requirement, the actual result is a 20 per cent delinquency as far as operating expense is concerned and it may cause serious embarrassment. If the debt service is only 25 per cent of the total budget, a 10 per cent delinquency would represent only about 13 per cent of the operating budget, which would not necessarily be as serious.

The next point which should be considered is contemplated financing by any local taxing units with particular care to see that it does not have a serious effect on the over-all net debt and also on the debt service schedules. As we noted, the debt service schedule should be declining and should not have any abnormal peaks. A municipality may have what appears to be a very good debt service schedule, but if the municipality is planning to bring out some issue in the near future which is going to upset that schedule, that should be taken into consideration.

Whether or not the municipality's bonds mature within the estimated life of the improvement is largely taken care of by the law. In most cases the law stipulates that the bond shall not run beyond the estimated life; however, this is a factor which should be considered in sound financing.

FLOATING DEBT

The amount of floating debt is an important factor. It is not usually considered improper to have a normal amount of debt outstanding for what is known as current tax debt. The amount of such debt usually depends on the manner in which taxes are collected. In some cases a municipality may collect taxes once a year, as is done in Massachusetts. On that basis the municipality must operate for about ten months of the year on borrowed money. Thus, we find a large amount of tax-anticipation borrowing in Massachusetts, which is paid off as taxes are paid in the fall. On the other hand, in New Jersey, where taxes are collected quarterly, there is, at the present time, practically no tax-

anticipation borrowing because funds come in frequently enough so that the municipalities are able to operate on a current basis.

The best procedure in examining floating debt is to compare the current floating debt with that of various periods in the past. If we find a rising trend, just as with the bonded debt, that is a danger signal and should be an indication that an examination should be made of the reason for such increase. There may be a plausible explanation and there may be nothing serious involved. On the other hand, if the floating debt is continually accumulating and the debt is large enough, eventually the municipality will not be able to pay it in any one year and will have to fund it.

That the sinking funds for term bonds should be adequate is obvious. The sinking fund should be kept up to actuarial requirement so that when the term bonds—that is, bonds which have one single maturity to an issue—come due there is sufficient money to pay them and avoid the necessity of refunding.

Under provisions for payment there is the question of whether the bonds are general obligations of the municipality or payable from some special source of revenue. In the majority of instances municipal bonds are general obligations. In the cases in which they are payable from a special source of revenue, that source may be adequate or it may not be adequate. However, if they are not general obligations, the source of revenue should be examined very carefully so as to be sure that it is entirely adequate.

TAX LIMITATIONS

Are bonds payable from unlimited ad valorem taxes or is there a constitutional or statutory limit on the amount of tax which may be levied for debt service? If a limit exists, how close is debt service levy to it at present? Two types of tax limit are stated here—*constitutional* and *statutory*. By a constitutional tax limit is meant a tax limit which is provided for in the state constitution and which can only be eliminated by a constitutional amendment. That is the most serious type of tax limit because it is the hardest to remove if there is any reason for so doing. A statutory limit is one that is imposed by the law of the state. Such limitation may not be too easy to change as it may be considered a protection against unduly heavy taxes. However, it can be changed by action of the state legislature without the necessity of a vote by the people of the state. Some municipalities have tax limitations provided by their charter. Also some tax limits exclude debt service requirements, but are applicable to operating expenses.

If there is a tax limit, the extent to which it is a danger factor, of

course, depends on the limit of taxing power which remains. If there is a tax limit of \$25 per thousand and the municipality is already levying \$25 per thousand, it has absolutely no leeway in the event that assessed valuations decline, operating expenses increase, or it wants to issue more bonds. On the other hand, if it had a \$25 limit and is only levying \$15, it has a \$10 per thousand leeway. The amount that represents in dollars can be found by multiplying \$10 by the number of thousands of dollars of assessed value. This will indicate just how much margin the municipality has for future needs. Obviously, unlimited tax bonds are always preferable to limited tax bonds because there is nothing, in that case, to prevent the municipality from levying an adequate tax other than the law of diminishing returns, since too high a tax rate may defeat its own purpose.

Of course, the purpose of a tax limit is not only to keep the tax rate down but to keep the borrowing of the municipality within reasonable bounds. The latter is a desirable feature but represents an incorrect approach to this problem. If the desire is to keep the borrowing of a city within a reasonable figure, the best way to control it is through a limitation on the debt-incurring power, not on the taxing power. When we limit the taxing power, while we may arrive at the result we desire, the municipality will pay for it in the interest rate on its bonds.

In practically all cases there is no priority of one issue over another with respect to the revenues from which they are payable. General obligation bonds, with rare exceptions, rank equally as to their claim upon *ad valorem* taxes.

TAX COLLECTIONS

In some cases there is a priority of claim against tax collections as between local taxing units. In more cases there is not. In New Jersey, for example, counties have a prior claim against tax collections. The taxes for both the counties and cities are collected by the cities. As the cities collect the taxes, they are supposed to turn over to the county in full the county's share of the tax bill. If there is any delinquency, it applies against the city's portion. Thus, theoretically, and, at the present time, actually, the counties in New Jersey get 100 per cent collection. Prior to the depression, that same situation was true; however, during the depression, when the cities began to run into difficulty, they failed to observe that provision and many of the counties received no funds. It was necessary for the counties to go to court, and the courts held that the municipality had to live up to the law and turn over to the county the county's share of the tax from the first funds collected. Therefore, from the standpoint of tax collections, counties in New Jersey are in a

better position than are cities. On the other hand, in Nassau County, New York, the county is responsible for the delinquency of the school districts and the towns. In other words, after the tax has been collected for the year, the school districts and the towns are to be paid in full, any delinquency has to be borne by the county, and the county officials have to enforce collections. In Westchester County, New York, the situation is just the opposite in that the local municipalities collect the tax and then must remit to the county in full.

In considering revenue collections it is important that a reserve or a cushion be provided in the annual budget against anticipated delinquency. Of a \$1,000,000 levy the municipality might expect to collect only 90 per cent. However, if the budget requires \$1,000,000, the city must collect that amount in full. In effect, therefore, the levy must be padded in order to provide revenues of \$1,000,000 over and above all delinquencies. That is done simply by dividing \$1,000,000, or whatever the required amount is, by the percentage which the municipality expects to collect. In other words, if the municipality required \$1,000,000 and expects to collect 90 per cent, it must levy taxes in the amount of \$1,111,111.

PREPARATION OF BUDGET

In this connection it will be helpful to review the manner in which the tax budget is made up. Take as an example a total budget of \$1,000,000. The first step, of course, which the municipality takes is to determine the estimated departmental expenses including debt charges. In this case it is assumed that those expenses total \$1,000,000. The next step is to estimate what revenues will be available other than ad valorem taxes. These will include the department revenues from licenses, fees, fines, and any revenues other than property taxes. This estimate is usually based on what was collected from those sources in the previous year. In this case it is expected that \$125,000 will be received from other than ad valorem taxes. In addition, delinquent taxes coming in from the levies of prior years will be available. The results of the previous year are taken into consideration along with other factors in making up that estimate. Assuming that the estimate for the current year from this source is \$225,000, there is then a total of \$350,000 estimated tax revenues which, when subtracted from the total budget of \$1,000,000, leaves a balance of \$650,000 to be realized from ad valorem taxes. Recognizing that all of such levy would not be collected in the year due, but assuming 90 per cent collection (based upon the results of the preceding year and upon other factors), it is necessary to increase the \$650,000 to cover noncollections during the year. In this case, the amount desired is arrived at by dividing 0.90 into \$650,000, which would indicate a levy of \$722,000.

One further step must be taken if the municipality is going to be on what is known as a cash basis. At the end of the year, it may find that it either was overly optimistic in estimating its revenue receipts or expenditures were underestimated. In either case or in both cases, it might end up with a deficit for the year. If that occurs, the deficit would be included in the next year's budget. Otherwise it will simply remain outstanding in the form of bank loans, unpaid bills, and so forth. As a matter of fact, one of the principal causes of difficulties in the past has been the accumulation from year to year of operating deficits which have not been taken care of in the following year's budget, with the result that they eventually had to be funded.

It is also important that the municipality have adequate penalties for nonpayment of taxes when due. At the present time, with money rates as low as they are, there is probably not quite as much temptation on the part of some individuals to use the municipality as a bank as there used to be when money rates were high and it was necessary to pay as much as 5 or 6 per cent on a bank loan. There was a tendency for some individuals simply to let their real estate taxes go if the tax penalty was not sufficient to more than offset what they would have to pay for money at the bank. In other words, if they had a 4 per cent penalty for nonpaid taxes, and they had to pay 6 per cent at the bank, they might let their real estate taxes go and use that money rather than go to the bank and borrow at 6 per cent. Thus, while it is difficult to state definitely what an adequate penalty might be, it would seem desirable that it should be no less than 8 or 10 per cent and preferably higher.

The regular holding of tax sales as provided for by law is essential because this not only brings in money to the municipality from property on which it is receiving no taxes, but it is also an incentive for the taxpayer to pay his taxes promptly in order that his property may not be put up for tax sale.

TAX RATES

In considering the over-all tax rate, trends and comparisons must be considered. Tax rates vary considerably in different states. What is a high rate in New York would probably be considered a low rate in New Jersey. In New York State a good many of the municipalities have tax rates in the neighborhood of \$30 per thousand. In New Jersey it is quite common to find them up around \$40, and some places have a rate somewhere around \$60. Of course, in considering the tax rate it is necessary to take into consideration the basis on which property is assessed. Naturally, if the assessed valuation is only 20 per cent of actual value, for example, it is necessary to have an apparently high tax rate in order to raise the needed funds.

Also, in examining a tax rate it is important to see how it compares with what the municipality has successfully paid in the past. Although a tax rate may be increased in a certain year over what it was the previous year, if it is still considerably below the rate which was being levied a few years ago without any difficulty, we can be fairly certain that there is not going to be much resistance on the part of the taxpayers. On the other hand, if the rate is increased to an all-time high, there will likely be considerable resistance; and while the taxpayers usually will eventually pay the rate if it is not entirely prohibitive, the situation is not conducive to good tax collections.

UNNECESSARY REFUNDING

It is undesirable for any municipality to follow a policy of unnecessarily refunding a part of its annual maturities in order to keep the tax rate down. Once such a policy is started, it is very difficult to stop because no administration wants to take the onus of increasing the tax rate. If the previous administration has refunded bonds to keep the tax rate at a certain figure, the incoming administration, in order to avoid responsibility for increasing the tax rate, is inclined to refund also.

SUPERVISION

Some states have supervisory bodies which control the financial practices of their municipalities. The authority may extend to actual approval or disapproval of the issuance of the bonds; it may be advisory; or it may simply involve supervision over the various details of the issue. However, it is extremely helpful to have a state body which keeps track of the finances of the municipalities and sees that they do not get into undue difficulty with their issues.

LEGAL OPINION

It is always the practice to require a marketable legal opinion with the delivery of municipal bonds as soon as an issue is bought. The account manager for a municipal issue prepares certified copies of the original legal opinion at the time the bonds are taken up for delivery. Certified copies accompany each block of bonds taken down by members of the account, and as bonds are delivered to purchasers, a legal opinion accompanies each delivery. An exception to this requirement are New York City issues brought out prior to April 23, 1934. In the case of state bonds, an opinion by a firm of municipal attorneys is generally required, although in some instances it is the practice to accept the opinion of the state's attorney general.

There are about one hundred law firms in the United States which either deal exclusively in municipal law or have departments which do

so. Those firms issue what are generally known as marketable legal opinions, some on local situations only and others on situations throughout the country. Occasionally a delivery will be accompanied by the legal opinion of a firm of attorneys with which one is not familiar. In such a case it is a simple procedure to check with other houses to determine if that opinion is good delivery.

The reader should have no difficulty in obtaining a copy of a legal opinion for the purpose of becoming familiar with the form that is customarily followed. The first part of the opinion consists of a detailed description of the issue, the amount, rate, date, maturity, bond numbers, purpose, and the act under which the bonds are issued, and so forth.

Of particular importance is the statement that "In the opinion of the attorneys, the bonds are valid and legally binding obligations of the municipality." This might be considered the heart of the opinion, since the opinion is obtained simply for the purpose of having competent legal advice that the bonds are valid and that they are binding obligations of the city or county, or whatever unit is concerned.

A second important feature requisite for a final legal opinion is the statement that the attorneys "have examined an executed bond." It is the custom, prior to delivery of an issue, to submit to the attorneys approving the issue, a bond in executed form, for their examination. Usually the bond submitted is the bond numbered 1.

A third important feature is the statement in regard to the taxing power behind the issue. In the case of unlimited tax bonds there is a statement that the bonds are payable from taxes without limitation as to rate or amount. In the case of limited tax bonds, the statement is that they are payable from taxes within the limitations prescribed by the constitution and laws of the state. The opinions do not usually go into detail as to just what those limitations are but put the buyer on notice that there are limits. It is then up to the buyer to satisfy himself as to what those limits are and as to what the margin of safety is.

The statement that an executed bond has been examined marks a final opinion. So, also, does the statement, without qualification, that the bonds are valid and legally binding obligations of the municipality. Occasionally, what is known as a preliminary opinion is issued prior to the delivery of the bonds.

The distinguishing features of the preliminary opinion are two: (1) the omission of the statement that an executed bond has been examined; and (2) instead of having a statement that in the opinion of the attorneys the bonds are valid and legally binding obligations, the statement will appear that, in their opinion, when a certain thing or things have been done, the bonds will be valid and legally binding obligations. Thus,

when bonds are delivered with an opinion, those two features are the first things which the person taking delivery will look at in determining whether it is a final opinion.

One of the occasions for the issuance of a preliminary opinion occurs when temporary bonds are issued. Temporary bonds are bonds which are sometimes issued prior to the delivery of the permanent, or definitive, bonds. The temporary bond, physically, looks somewhat like a stock certificate and may or may not have coupons on it, depending on the length of time that is expected to elapse before the permanent bonds are ready.

MUNICIPAL DEBT STATEMENT

The form of the debt statement often used in the offering circular has been discussed, and it was noted that it was more or less restricted to the form provided for by the New York Savings Bank Law. In that form only water bonds were deducted as self-supporting debt in the process of determining net direct debt. Also, there was no computation of net over-all debt, which includes net overlapping debt.

In contrast to this rather rigid form of circular debt statement, many analysts use for their own purposes a more flexible form which enables them to arrive at the ratio of *net over-all debt to assessed valuation*, and, primarily, the ratio of *net over-all debt to estimated real value*. The latter ratio is, in a sense, a final criterion of the security behind a municipal bond.

An example of one form of such a statement is shown in Table 17. The computations involved in using this form are relatively simple, and the statistics necessary to make them may be derived from a number of sources, including services such as that of Dun and Bradstreet.

In using this form the analyst is not restricted by any set rules. In other words, if he believes, on the basis of available information, that certain obligations should be deducted in determining the total burden against the municipality, he may do so. If, in his judgment, he believes that certain obligations should be included in the total debt, he may include them.

Items 1, 2, and 3 are self-explanatory. In making the deduction of item 4, however, he may, instead of deducting only water debt, deduct any indebtedness which is self-supporting even though payable from ad valorem taxes if necessary. In deducting sinking funds, of course, he only includes sinking funds for other than the self-supporting debt included in item 4. When the total of items 4 and 5 is deducted from item 3, the remainder is net bonded debt—item 6.

In determining net direct debt, floating debt is added to the net bonded

debt. In floating debt is included any floating debt which may become a charge against future taxes. Ordinary tax anticipation borrowing, which presumably will be paid off during the current year, is not included since taxes have already been levied to satisfy that obligation. Any items of floating debt payable from special assessments or from any source that is not a charge against taxes would likewise be excluded. Items such as bond anticipation notes or any other items which will be a charge against future years' tax revenues or which will eventually have to be funded should be included. Thus, when item 7 has been determined, the total of items 6 and 7 will give us the net direct debt.

TABLE 17

Municipal Debt Statement

1. Real value of taxable property (estimated)		_____
2. Assessed valuation for taxation 19—		_____
3. Total bonded debt		_____
4. Less self-supporting debt	_____	
5. Less sinking funds*	_____	
6. Net bonded debt		_____
7. Floating debt		_____
8. Net direct debt		_____
Ratio net direct debt to ass'd val.	_____	
Ratio net direct debt to est. real val.	_____	
9. Net overlapping debt		
	_____	_____
	_____	_____
	_____	_____
10. Net over-all debt		_____
Ratio net overall debt to ass'd val.	_____	
Ratio net overall debt to est. real val.	_____	
Pop. 1940 census		
Pop. 19— est.		

* other than for self-supporting debt.

The ratio of net direct debt to assessed valuation is determined by dividing item 8 by item 2 and is *expressed as a percentage*. The ratio of net direct debt to estimated real value is determined by dividing item 8 by item 1 and is also *expressed as a percentage*.

NET OVER-ALL DEBT

The value of this form of statement lies in the fact that after the above computations have been made it is possible to go further and determine the net over-all debt and the ratios of net over-all debt to assessed valuation and to estimated real value. Obviously, the net direct debt might be relatively small, but a municipality might have a radically heavy burden of overlapping debt in the form of county or district debt. Thus, provision is made in item 9 to give effect to the net debt of coterminous, underlying, and overlapping units.

In determining the amount of such debt applicable to the municipality being analyzed, it is considered that: (1) in the case of a coterminous or underlying unit 100 per cent of the net debt of such unit or units is applicable; and (2) where there is an overlapping unit, such for instance as a county, the proportionate part of the net debt of such overlapping unit as the assessed valuation of the municipality bears to the assessed valuation of the overlapping unit is also applicable.

Thus, the net overlapping debt burden on the property within the municipality being analyzed is determined and the result is entered as item 9. That total is then added to item 8, net direct debt, furnishing the net over-all debt, item 10.

The ratio of net over-all debt to assessed valuation is computed by dividing item 10 by item 2 and the ratio of net over-all debt to estimated real value of taxable property is computed by dividing item 10 by item 1. The latter ratio furnishes a fairly accurate estimate of the over-all debt burden.

It is really impossible to name any definite figure which can be considered the dividing line between a conservative and a high over-all debt ratio. Conditions and resources in municipalities differ so widely that a percentage of debt which might be an undue burden in one city might cause little difficulty in another. In the average community, however, when the ratio of net over-all debt to estimated actual value passes 9 or 10 per cent, it is usually considered that it is getting out of the conservative class.

OBLIGATIONS OF STATES

Heretofore, practically all of this discussion has concerned the obligations of the subdivisions of states and not of the states themselves. The principal emphasis, in so far as security is concerned, has been on ad valorem taxes which represent the main security behind the majority of municipal obligations.

In the case of state bonds, however, the situation is quite different. The states, on the whole, depend very little on real estate taxes. There are some that do not levy any taxes whatever against real estate. Compared with the importance of ad valorem real estate taxes to municipalities, this source of revenue is a very minor factor in the case of most states.

Also, from the standpoint of enforcement, there is a considerable difference between state obligations and those of a state subdivision. As was mentioned earlier, in the case of a municipal obligation, that is, the obligation of a city, county, town, or other subdivision, if the bond defaults or the municipality declares it invalid, redress is had through the

courts. However, the holder of a state bond has to rely almost entirely on the good faith of the state, because a state cannot be sued by an individual in order to compel it to fulfil its obligations without its consent. This means, of course, that in the case of default the bondholder does not have the same legal redress that he has in the case of a municipal obligation. The State of New York is an exception to this rule through its consent to suit.

States get their income from various sources. As was mentioned, some of them resort to real estate taxes. However, the major sources of income to the states consist of gasoline taxes, motor vehicle license fees, state income taxes, tobacco taxes, corporation taxes, beverage taxes, sales taxes, franchise taxes, business license fees, and various other taxes, some of them not of very great importance.

TYPES OF STATE OBLIGATIONS

There are three general types of state obligations. First, there are general obligations in connection with which there are no pledged revenues, as, for instance, the general obligations of the states of New York, Massachusetts, and Connecticut. They are payable from the general funds which come into the state, the funds not being segregated in any particular manner. While the bonds usually have a priority against those funds, there is no pledge of any specific source of revenue. The types of revenue and the relationship between them may vary from year to year.

Second, there is a type of state obligation which, while it is a general obligation of the state, is payable primarily from a special pledged source of revenue. We find obligations of this type in Louisiana, Tennessee, Arkansas, Alabama, North and South Carolina, Minnesota, Missouri, and some other states.

We also have a third type of state obligation, which, while it is issued by the state, is not a general obligation of the state but is payable solely from some special source of revenue. Mississippi highway bonds, for example, are payable solely from the pledged highway revenues of the state. The state, in such a case, has no legal obligation to raise funds from any other source if the pledged revenues prove inadequate. As a practical matter, the highway funds are the most important source of revenue in Mississippi, so that making the bond a general obligation would probably not add very much to the security.

There are some states which have no bonded debt whatever in the hands of the public. These include Indiana, Nebraska, Nevada, Ohio, Wisconsin, and Texas. Arizona and Wyoming have practically no debt. Florida has no state debt as such, but the state uses the state gasoline

tax in large measure to pay the debt service on county road bonds, which are now serviced through the State Board of Administration.

In the case of Iowa, the state is prevented by its constitution from incurring any road debt, but it has taken over, for all practical purposes, the primary road bonds issued by the counties. The counties issue their own bonds to pay for state highways and the state reimburses the counties in an amount sufficient to take care of the debt. Thus, the primary road bonds issued by the counties of Iowa sell for excellent prices because they are, in effect, similar to state obligations.

Kentucky, practically speaking, has no direct public debt, although there are some \$2,000,000 of irredeemable bonds which are held by the state treasury. The state also has a number of issues of bridge revenue bonds outstanding, which, however, are not general obligations of the state.

Other states, with the exceptions of the ones we have mentioned, all have bonds outstanding in greater or lesser degree, either general obligations, special, or both.

DEFAULTS

We shall mention briefly a few of the more prominent defaults which occurred during the 1930's in order to give the reader some idea of their causes and an idea of some of the things that should be avoided when buying a credit.

The state of Arkansas, in its early history, had a rather turbulent debt record and was in default twice before the 1930's. However, its modern debt history really begins in 1927 when the state issued \$84,000,000 of highway bonds and assumed about \$47,000,000 of road district debt. This gave the state an extremely high debt burden for its limited resources. With the decline in highway revenues during the depression in 1930, the burden became too great for the state. In 1932 it defaulted, and after an unsuccessful refunding plan, a program was instituted in 1941 which solved the state's problem by lengthening out the maturities in order to decrease the debt service requirements each year. Under that program, the state has been proceeding satisfactorily and, as we previously mentioned, the bonds are set up so that, of approximately \$7,000,000 of debt service each year, \$1,000,000 is to be used to call term bonds. This provides a margin of safety in the event that revenues fall below the required level.

DETROIT

Detroit had a phenomenal growth of debt, from about \$26,000,000 in 1920 to about \$275,000,000 in 1930. That, of course, coincides with the

extremely rapid growth of the city due to the development of the automobile industry. As a result of this increase in debt, the percentage of tax levy for debt service increased from about 18.9 per cent during the fiscal year 1927-1928 to 42.7 per cent in fiscal 1932-1933. In other words, the levy for debt service comprised almost half of the total budget. This situation caused too great a strain on the city's resources and, since the amount required for debt services was constant, as revenues fell off the amount available for operating expenses began to decline, shrinking from about \$61,000,000 to around \$41,000,000 at a time when the city's requirements were going up. At the time of the depression, this decrease in the amount of money available for operating expenses was further aggravated by relief costs due to unemployment in the automobile industry.

However, in spite of the serious problems with which the city was faced, it made a valiant effort to meet its debt. Whether it could continue to do so was problematical, but the decisive factor was the bank holiday of 1933, which caused the city's funds to be impounded so that it had no funds with which to meet its debt service. As a result of this, it went into default and was in default for some time until a comprehensive debt reorganization program was worked out. Since then, the re-funding bonds themselves have been refunded at lower rates of interest.

MOBILE

Mobile, Alabama, is another city that had considerable trouble in solving its problems as a result of default during the depression. This is a typical example of the difficulty that may arise when there is a tax limit affecting debt service, since, in the state of Alabama, there is a constitutional limitation on the power to levy taxes which applies to debt service as well as operating expenses.

Mobile had a high debt at the time of the depression—practically 23 per cent of actual values. This, of course, caused a considerable burden on the city's operating budget because of the fact that the tax limit of three-quarters of 1 per cent had to cover not only debt service but operating expenses as well. Also, the assessed valuation of the city declined from about \$63,000,000 in 1932 to \$40,000,000 in 1936 with a resultant decline in the revenues available from the three-quarters of 1 per cent levy. As a result, the city had an accrued operating deficit which grew for several years and finally amounted to over \$2,000,000. Eventually, the city reached the point where it was unable to refund its operating deficit and unable to meet its debt service requirements. Therefore, it was in default for quite a number of years.

In this case, it took longer than in many other instances to work out a

refunding program to put the city back on its feet because of the problems raised by the tax limit. The city has since refunded its debt and it is now current.

GREENSBORO

Greensboro, North Carolina, got into trouble largely because of an overambitious real estate development program in the late 1920's. The story here is told pretty largely by the figures as to the city's population which grew from 19,000 in 1920 to 53,000 in 1930. While some of that increase was accounted for by annexation, a good part of it was a result of actual population growth. This very substantial and rapid growth of the city gave rise to an ambitious program of public works and improvements in order to provide for the needs of the population. In a short while, overoptimism gave rise to considerable overdevelopment of the newer areas of the city where sewers, streets, and so forth were constructed in conjunction with real estate developments. This resulted in an increase in debt to about 18½ per cent of actual values.

Also, one other factor which was the cause of considerable difficulty in Greensboro was the fact that a large part of this debt was in the form of special assessment obligations which, while they were a general obligation of the city, were supposed to be paid primarily from collections of assessments against the benefited property. If the benefited property did not sell, the real estate developers, in many cases, simply let it go. Thus, the assessments were not collected and the bonds fell back on the general fund of the city, becoming a further aggravating cause for its default.

Greensboro, like Detroit, has now refunded its debt and spread out its maturities, and the city at the present time is in excellent shape. It has paid off a good part of its debt and, of course, has learned a lesson from the overdevelopment it went through during the late 1920's.

OTHER DEFAULTS

Hillsborough County, Florida, suffered from improper planning of its maturities. It had a large amount of short-term highway bonds which were issued in the late 1920's so that it had very heavy maturities which were due just about the time of the depression when revenues were falling off. However, the county was proceeding rather successfully with a refunding of its early maturities, that is of the bonds due in the years 1933 to 1936, by means of an offer of exchange with the holders. The holders of these early maturities were offered new bonds, and, rather than force the county into default, which would have affected very disastrously the market for its bonds, the bondholders, in the majority of instances, were quite willing to cooperate.

However, trouble arose in connection with about \$1,600,000 of special assessment road bonds which also, in this case, were a general obligation of the county. These bonds were issued somewhat similarly to the situation in Greensboro, to pave and put in sewers in outlying sections of the county during the real estate boom in areas where there was no development whatever. Thus, there was quite a bit of local agitation to have the bonds declared invalid. Eventually, the courts upheld the validity of the bonds, but pending that, the bonds were in default for some time.

Atlantic City had a very heavy debt of about 22 per cent when the depression came. This problem, of course, was complicated by the fact that the city's livelihood is based primarily on resort business, which is vulnerable during any time of economic depression. Therefore, the city had considerable difficulty in working out of its default.

REVENUE BONDS

Municipal revenue bonds might be defined as any bonds issued by a municipality, a municipal agency, or an authority payable solely from the revenues of a project or group of projects. These might include water works issues, electric power issues, sewer revenue bonds, toll bridge bonds, or toll road bonds. None of the bonds of this type have any taxing power behind them. They are simply payable from the earnings of the particular project.

The original reason for the issuance of municipal revenue bonds was that most municipalities operate under debt limitations which were written years ago when municipalities had fewer proprietary functions than they now have. As the demand for additional types of services increased, the necessity for expanding their means of financing outside of the existing limits arose.

One of the first types of revenue bond was the assessment bond which was not a general obligation, but was payable only from assessments. Bonds of this type might be payable from assessments against benefited property for paving or for sewers, and so forth, but if the assessments fail to provide the necessary funds there is no obligation on the part of the city to service the debt. This is not a desirable type of obligation, and the history of straight assessment bonds has not been very good.

We must emphasize that when we speak of assessment bonds as having had a bad history, we are referring to straight assessment bonds which have no taxing power behind them. However, there have been cases where assessment bonds which were also general obligations have caused difficulty. Usually, this occurs because they are issued with the expectation that the city will not have to levy ad valorem taxes to pay them and that they will be entirely serviced from assessments. If the revenue

from assessments is not adequate, they then revert as a charge to the city's taxing power and may cause trouble by increasing the budget requirements above expectations.

The type of revenue bond encountered most frequently, at the present time, is the municipal utility bond. The most common is the water revenue bond which is issued to construct, improve, or expand a municipal water plant or a distributing system or to purchase an existing one from a private company. In recent years, many millions of revenue bonds have been issued for municipal electric light and gas plants as well as for sewage systems and other purposes.

It is popularly said that a municipal revenue bond is not a debt of the municipality. From a legal standpoint, this is not strictly true. What is meant is that the bonds do not apply against the municipal debt limit and are not payable from general taxes. Actually, a revenue bond issued by a city is an obligation of the city, but the city's obligation simply extends to the payment of the bonds from a special source of revenue which, in the case of water bonds, would be the water revenues.

In some instances revenue bonds may carry a mortgage lien on the property. In some states such a lien is permissible while in others only the revenues from the project may be pledged.

In the case of default, the bondholders may mandamus the municipality to perform under the terms of the indenture of the authorizing resolution. Such action may result in ceasing improper allocation of funds if this is being done, or in raising the rates, if practical. It will, of course, be kept in mind that in raising rates the law of diminishing returns at times becomes operative. Where there is a mortgage lien, there is in addition to the right of mandamus the power to foreclose on the property. This, however, is seldom done in view of the various problems and complexities involved.

Usually when a project defaults, it is simply because the earnings are insufficient. This may be merely temporary or it may be more or less permanent. In the case of default resulting from the lack of revenues, other than of a purely temporary character, the practical solution usually is to reduce debt service and other charges to a point where the bonds can be exchanged for obligations that can be met from the available earnings. Such a compromise is frequently considered better than involved legal proceedings.

In connection with municipal revenue bonds, the best procedure is care in examining the coverage afforded by earnings and assurance that estimates of revenues, operating expenses, and other matters are on a conservative basis. Also, it is necessary to be sure that there is sufficient margin of safety against unforeseen contingencies.

BONDS OF AUTHORITIES

One type of municipal revenue bond is that which is issued by an *authority*, which is simply a municipal corporation formed for the purpose of operating certain facilities and issuing revenue bonds payable from earnings of those facilities which may or may not be confined within the limits of a single municipality. Similar to the *authority* is the *commission*.

Examples of authorities or commissions which operate within the limits of one municipality would be the Buffalo Sewer Authority, which is entirely within the City of Buffalo; the Triborough Bridge Authority, which is in New York City; and the Louisville Bridge Commission, which issued the Louisville Bridge Bonds. Examples of these entities which have wider jurisdiction would be the Port of New York Authority which, of course, includes a rather wide area in its jurisdiction; the Pennsylvania Turnpike Commission, which operates the Pennsylvania Turnpike; the Thousand Islands Bridge Authority, and various others of that character.

Authorities may be intrastate, when operations are entirely within one state, or they may be interstate, as is the case with some river crossings. Where interstate service is involved, it is essential to have some sort of contract between the two states, as it is necessary to have cooperation on both sides of the bridge if traffic is to be brought to it. If there should be a conflict between the states and one of them should reroute traffic elsewhere, the effect on revenues might conceivably cause default.

APPLICATION OF REVENUES

Revenue bonds may be issued under two different instruments. One form is an *indenture* between the issuing body and a bank under which the latter acts as a trustee. The other is a simple *resolution* of the municipality which may or may not provide for a trustee.

Generally speaking, the order of application of revenues as set forth in the indenture or resolution would be about as follows: In the first place, all revenues would go into a revenue fund. Against this, the first charge would be operating and maintenance expenses. Then usually there would be a depreciation fund the amount of which, of course, would depend on the estimated life of the project. In some cases it is provided that contributions to the depreciation fund may be waived if earnings decrease to the point where debt service would be threatened, but usually the depreciation fund would have to be restored at a later date.

After the depreciation fund would come debt service; and in setting up a revenue issue, the amount of money coming through to debt service, of course, is a factor in determining the size of the issue, the manner in which the issue can be made to mature, and so forth.

Then, after debt service, any surplus usually goes to set up certain reserves, such as an operating reserve to provide for any unusual operating expenses in any one year, and a debt service reserve. In some cases it is provided that money shall be paid into a debt service reserve until that reserve equals six months' or a year's debt service requirements. In others it is required that payments be made into the reserve until it equals a certain percentage of the outstanding bonds. Ordinarily, this reserve must be kept intact and used only if there is a deficit in the amount of money with which to pay debt service. If it is necessary to use the reserve to augment the funds currently available for debt service, there is usually a provision that it must be restored to the required amount before any earnings can be considered to be surplus.

After reserves, we have what we call surplus revenues, which can usually be used for any lawful purpose. They may be used to pay the city in lieu of taxes, they may be used for additions and betterments to the property, and they might be used to retire bonds, either through call or by purchase in the market.

It is generally considered preferable not to restrict too rigidly the use to which surplus revenues may be put. In some instances it is provided that all surplus revenues can be used only for debt retirement. This, however, prevents the use of these revenues to meet unforeseen contingencies which might be of a nature that would cause considerable embarrassment if the surplus revenues were not legally available. Thus, it is generally considered sound practice to leave the disposition of surplus revenues, within reason, to the determination of the commission or authority that is operating the project.

There is also a type of revenue bond usually termed *gross revenue bond* where all revenues received from the project are available for debt service and reserves. The Highway Department of the state of California provides operating and maintenance expenses for the San Francisco-Oakland Bay Bridge of the California Toll Bridge Authority, thus leaving the gross revenues available for debt service and reserves.

MATURITY PROVISIONS

Maturities of revenue bonds are usually of three types. An issue may be all serial bonds, it may be all term bonds, which are callable, or it frequently may be a combination of the two. In the last case the issue will be made up of serial maturities with a *balloon* maturity, or large maturity at the end, which is callable.

It is usually considered that the latter is to be preferred to a straight serial issue because the revenues supporting a revenue bond tend to

fluctuate more than *ad valorem* taxes. Therefore, in order to provide a margin of safety for periods in which earnings may fall off, it is desirable to have a certain amount of the issue in term form and callable, so that if revenues are not sufficient, default may be avoided by omitting the call. With a straight serial issue there is no alternative except to pay the principal that is due or default if revenue is not sufficient.

In the case, for example, of water bonds, where the earnings are more stable than the earnings of other types of facilities, it may be entirely safe to have serial maturities only. In the case of toll bridge bonds, bonds whose revenues are dependent on automobile traffic which may fluctuate, a serial issue with a balloon maturity or a straight term bond is usually preferable.

In practically all revenue bonds, we find that there is a call feature. When the bonds are called, the funds for calling them usually come from two sources, either out of earnings or through refunding. If the bonds are term bonds, unless all of the outstanding bonds are called, the call is usually made by lot. If they are serial bonds, the frequent custom is to call them in the inverse order of maturity, calling the longer bonds first which, of course, saves the greatest amount of interest for the municipality.

MAINTENANCE OF RATES

There should also be a covenant in the instrument under which the bonds are issued as to the maintenance of rates. In other words, the management should be charged with the responsibility of levying rates or charges sufficient to cover debt service and to maintain and operate the project in a satisfactory manner. From a practical standpoint, probably the principal value of this is to prevent the management from submitting to popular demand for reduced rates.

METHOD OF SALE

The method of sale in connection with revenue bonds is somewhat different from general obligation municipal bonds in that the latter are generally sold at public sale through the receipt of sealed bids. Revenue bonds, however, are frequently sold through private negotiations. In some cases the nature of the revenue bond does not lend itself to public bidding. The officials may not have enough experience in setting up a revenue issue to know just what the procedure is, and in that case, they frequently find that they are better off in making arrangements with a reputable house in whom they have confidence, letting the house assist them in setting up the issue.

OTHER CONSIDERATIONS

As to length of maturity, in any type of financing it is not considered sound to have bonds run beyond the life of the improvement for which they were issued. This is particularly true in the case of revenue bonds, as there is no source of payment other than the revenues of the project. Of course, if a miscalculation is made in connection with a general obligation municipal bond and the bonds are issued for a period which happens to be longer than the life of the improvement, the only bad feature is that the taxpayers will be paying taxes on something which no longer exists. So far as the bondholder is concerned, his bonds are going to be paid. In the case of a revenue project, if there is a miscalculation and the facility gives out before the bonds mature, there is no source whatever from which the bonds can be paid. Thus, it is very essential that sufficient margin of safety be allowed.

Another feature which should be given consideration is the management, because no project is any better than its management. For this reason it is often the practice to set up a nonpolitical, self-perpetuating board or commission to run the project, to provide for supervision by an independent engineer of national reputation, and to place operations under a trained manager.

Then also, there should be a provision for future needs. Sometimes, when the facility is being constructed, it is not possible to foresee just what the future may hold. It may become necessary to increase the size of the facility. Various improvements may be needed which will require financing. Therefore, there should be sufficient leeway in the indenture or the resolution to permit additional financing, either ranking equally with the outstanding bonds, or second lien bonds ranking junior to those outstanding. If bonds of equal rank are permitted, there should be safeguards set up which would require that earnings should be at a certain figure before additional bonds can be issued.

Insurance is, of course, a very important feature, as was emphasized in the collapse, a few years ago, of the Tacoma Narrows Bridge, in which the bondholders were paid off at par plus the call premium of the bonds through the proceeds of insurance.

Another factor which should be considered in connection with a revenue project, particularly with a river crossing or anything of that nature, is that competition be eliminated. This may be done by placing restrictions on the power of the appropriate municipal or state officials to grant permission for a competing facility to be built. It is clear that it is not desirable to purchase bonds for a toll bridge where there is no restriction preventing someone from building a similar bridge near by which for some reason or other might be more advantageous.

Also, as in the case of other municipal bonds, it is essential to have a satisfactory legal opinion on revenue bonds. In a majority of cases, the attorneys who pass on revenue issues are the same as those who pass on other municipal issues.

MATHEMATICAL PROCEDURES

As a conclusion to this discussion it might be well to consider a few of the mathematical procedures that are useful in connection with municipal bond work. For example, it is necessary, once a scale has been decided upon, to determine the average selling price of the issue on the basis of that scale, and to arrive thereby at a bid price. Likewise, in awarding an issue, it is necessary to determine the net interest cost to the issuer on the basis of the various bids submitted. Further, it is frequently desirable to compute the average maturity of a serial issue.

AVERAGE SELLING PRICE AND BID PRICE

Table 18 consists of an offering scale for a hypothetical issue of \$715,000, 1½ per cent bonds dated May 1, 1946, and due serially May 1, 1947 to 1957. In this case the dollar price for each maturity has been computed, and the average selling price has been computed therefrom.

The procedure used in determining the average price is to multiply the dollar price for each maturity by the number of bonds in that maturity. For example, the price of 101.10 for the 1947 maturity would be multiplied by 50. The price of 101.99 for the 1948 maturity would be multiplied by 50. A similar process would be applied to the remaining maturities. The total of these products divided by the total number of bonds in the issue equals the average price.

In computing the average selling price in Table 18, however, we have shortened this process. In this case we have added the dollar prices of those maturities having the same number of bonds coming due and have multiplied the total by the number of bonds in one maturity. Thus, it will be noted that there are 50 bonds due each year in 1947, 1948, and 1949. Adding the dollar prices of those three years, we get a total of 305.76 which, when multiplied by 50, gives us a result of \$15,288. This is the same result, obviously, that would have been obtained by multiplying the price of each of the three maturities by 50 and adding the three products.

Following the same procedure for those maturities having 60, 75, and 100 bonds respectively, a total of \$74,503.45 is obtained which, when divided by 715 (the number of \$1,000 bonds in the issue), results in an average dollar price of 104.20 for the entire issue.

After determining the average price at which it is expected the issue

will be sold, if sold on the bases indicated in the offering scale, it is necessary to determine the spread and ultimately the bid price. Assuming that a spread of 0.92 per cent might at present be appropriate for an issue of this quality, size, and maturity, it is merely necessary to deduct that amount from the average selling price to arrive at the bid price of 103.28.

TABLE 18
Computing Average Selling Price of an
Offering Scale and Bid Price

\$715,000 1½%				Due May 1, 1947-57	
Dated May 1, 1946					
Amount	Due	Yield	Price		
\$ 50,000	1947	.40%	101.10		
50,000	1948	.50	101.99		
50,000	1949	.60	102.67	305.76 × 50 =	15,288.00
60,000	1950	.65	103.35		
60,000	1951	.70	103.92		
60,000	1952	.75	104.39		
60,000	1953	.80	104.76	416.42 × 60 =	24,985.20
75,000	1954	.85	105.02		
75,000	1955	.90	105.18		
75,000	1956	.95	105.23	315.43 × 75 =	23,657.25
100,000	1957	.95	105.73	105.73 × 100 =	10,573.00
<hr/> \$715,000					<hr/> 74,503.45
74,503.45 ÷ 715 = 104.20 — Average selling price					
.92 — Spread					
<hr/> 103.28 — Bid					

COMPUTING NET INTEREST COST

In bidding on serial bonds at public sale, it has become the accepted practice, with the encouragement of the IBA, to determine the highest bid, especially when there is more than one interest rate, by what is known as the *interest cost method*. In other words, if there are two bids, each with a different combination of interest rates, the problem is to determine which one is a better bid from the standpoint of the issuer.

Under the interest cost method, the total amount of dollars which the municipality will pay out on the issue in interest over the life of the loan is computed, from which is deducted the amount of premium, if any, that may be bid.

The procedure to be followed in computing the net interest cost of a serial issue with a single interest rate is as follows:

1. Multiply the number of bonds of each maturity by the number of years of life of that maturity.
2. Add the products to get total bond years for the issue.
3. Multiply total bond years by the interest rate expressed in dollars per bond per year to get the total interest paid out during the life of the issue.
4. Subtract the total amount of the premium bid, if any. The remainder is the net interest cost in dollars for the issue.
5. Divide total bond years into net interest cost in dollars to get net interest cost per bond per year and divide by 10 to get net interest cost percentage rate. (Assuming \$1,000 denominations.)

As a simple illustration of the procedure outlined above, take an issue of \$210,000 of 2 per cent bonds for which a price of 100.50 has been bid. Assume that the maturities run from 1 to 10 years as follows:

1 year	\$10,000
2 years	10,000
3 years	10,000
4 years	20,000
5 years	20,000
6 years	20,000
7 years	30,000
8 years	30,000
9 years	30,000
10 years	30,000

The first step is to multiply the number of bonds of each maturity by the number of years of life of that maturity. When this is done, the products 10, 20, 30, 80, 100, 120, 210, 240, 270, and 300 indicate the number of bond years for each maturity in order.

The next step is to add the products, or the number of bond years in each maturity, to get the bond years for the entire issue. In this case the total of bond years is 1,380. In other words, this issue of \$210,000 with serial maturities as scheduled is the equivalent, so far as the amount of interest paid out is concerned, to \$1,380,000 of 1-year bonds.

Thus, it is clear that by multiplying the total bond years by the coupon rate expressed in dollars per bond per year, the total interest paid out during the life of the issue is determined. In this case, with 2 per cent bonds, each bond will pay out \$20 per year in interest. The total interest that will be paid out over the life of the issue, then, will be \$27,600, or $\$20 \times 1,380$.

However, the bid was 100.50, which represents a premium of \$5 per bond. Therefore, on the total of 210 bonds, the total premium to be paid to the issuer will be \$1,050. This premium we subtract from the total amount of interest which the issuer must pay as computed above, leaving \$26,550 as the net interest cost in dollars to the issuer. In comparing

bids, the final figure of \$26,550 would be the figure which would be used.

Finally, in determining the net interest cost rate it is necessary to divide the net interest cost (\$26,550) by the total bond years (1,380). This will be the net interest cost in dollars per bond per year, which, when divided by 10 (assuming \$1,000 denominations), will give us the net interest cost rate. In this case the net interest cost percentage rate will be 1.924 per cent.

COMPUTING NET INTEREST COST ON SPLIT RATE ISSUES

The procedure to be followed in computing net interest cost and the net interest cost rate on a serial issue with more than one interest rate is as follows:

1. Make the following computations for each block of maturities bearing the same interest rate:
 - a. Multiply the number of bonds of each maturity by the number of years of life of that maturity.
 - b. Add the products to get the total bond years for that block of maturities.
 - c. Multiply the total bond years of that block of maturities by the interest rate for those maturities, expressed in dollars per bond per year, to get total interest paid out on those maturities.
2. Add the bond years for each block of maturities to get total bond years for the issue.
3. Add the total interest for each block of maturities to get total interest paid out on the entire issue.
4. Subtract the total amount of the premium bid, if any. The remainder is the net interest cost in dollars for the issue.
5. Divide total bond years for the issue into net interest cost in dollars for the issue to get net interest cost per bond per year and divide by 10 to get net interest cost percentage rate. (Assuming \$1,000 denominations.)

As an illustration of the procedure to be followed for a split-rate issue, assume an interest rate of 2 per cent on the first four maturities and 1 per cent on the remaining maturities of the issue previously used as an example. The following is a schedule of amounts, interest rates, maturities, and bond years:

<i>Amount</i>	<i>Rate</i>	<i>Maturity</i>	<i>Bond Years</i>
\$10,000	2%	1 year	10
10,000	2%	2 years	20
10,000	2%	3 years	30
20,000	2%	4 years	80
20,000	1%	5 years	100
20,000	1%	6 years	120
30,000	1%	7 years	210
30,000	1%	8 years	240
30,000	1%	9 years	270
30,000	1%	10 years	300

The first step is to determine the number of bond years for each maturity and then the total bond years for each block of maturities bearing the same interest rate. In this case, the total of bond years for the maturities paying 2 per cent is 140. The total of bond years for the 1 per cent bonds is 1,240.

It should be clear, then, that the amount of coupon interest paid out on the 2 per cent bonds will be $\$20 \times 140$, or \$2,800. The amount of coupon interest paid out on the 1 per cent bonds will be $\$10 \times 1,240$, or \$12,400.

Adding the total bond years for each block, we get a total for the issue of 1,380. Adding the total interest to be paid out on each block gives a total of \$15,200. Assuming a bid of 100.50 and deducting the premium of \$1,050, we find that the net interest cost is \$14,150. Completing the computation, we get a net interest cost rate of 1.025 per cent.

It can readily be seen that in determining the net interest cost which might result from a number of bids naming different interest rates, comparison is reduced to a common and clear-cut basis.

AVERAGE LIFE OF SERIAL BONDS

There are two methods of computing the average life of serial bonds. One is the *arithmetical average* and the other is the *actual*, or *scientific* average.

The arithmetical average is computed very simply by determining the total number of bond years of an issue and dividing by the total number of bonds. For example, if the bond years for the issue shown in Table 18 are computed, the total will be 4,745. Dividing that figure by 715, the number of bonds in the issue, we will find the arithmetical average life of that issue to be 6.64 years.

It is sometimes desirable to know the average price of a serial issue on a given basis. Instead of figuring a scale on an issue, in other words, it might be desirable to know what the average price of an issue would be on a 1.00 yield basis, or a 1.50 yield basis, for example. This may be done by determining from the basis book the price of a bond of the average maturity of the issue at the desired yield.

However, it is not accurate to use the arithmetical average for this purpose. The reason for this inaccuracy is that calculation of the net return or yield on a bond as shown in the basis book is based on the principle of amortizing or accumulating premium or discount at the yield rate for the given maturity, and, therefore, a more detailed procedure than using the straight arithmetical average is necessary.

For example, in determining the average price of the issue shown in Table 18 on a 0.75 basis, if the arithmetical average of 6.64 years were

used it would be found that a variance existed between the price so derived and the price determined by computing a 0.75 per cent basis for each individual maturity and taking an average of those prices. Further, to compute a 0.75 basis all the way through on the issue, take an average and then determine from the basis book the maturity that corresponds with that price; the maturity will be found to be shorter than that derived from the arithmetical average.

The difference between the maturity obtained by means of the arithmetical average and that obtained by the use of the so-called scientific average is known as the run-off. The run-off increases as the length of the issue increases. In this particular case, the run-off is relatively small because the issue is rather short.

Figuring a 0.75 basis on this issue for each maturity and taking an average of the prices so obtained, the average price will be 104.819. A $1\frac{1}{2}$ per cent bond at that price will be found to have a maturity of 6.595 years as against the 6.64 years indicated by the arithmetical average. Clearly the difference is not great, but in an issue running for 30 years a difference of as much as a year or more between the two methods might be found.

Thus, when it is desired to determine the prices which will result from various bases for an entire issue it is first necessary to determine the actual or scientific average. Once that is determined, without further complicated figuring it is possible by using that average maturity to determine the average price for any desired basis. Likewise, it is possible to determine the average yield on any given price.

The procedure to be followed in determining the actual average, then, is as follows:

1. Compute the average price of the issue at any given basis using the same basis for each maturity.
2. Determine from the basis book the maturity at which the average price would equal the basis used. This maturity is the actual, or run-off average.

REVIEW QUESTIONS

1. In reviewing the character of a community to evaluate its municipal credit, what factors are analyzed?
2. In reviewing the debt of a community to evaluate its municipal credit, state the significance of:
 - (a) Relationship of total debt burden to the population.
 - (b) Relationship of total debt to the actual evaluation.
 - (c) Trend of debt and trend of debt service requirements.
 - (d) The ratio of annual debt service to total annual revenues.
 - (e) The effect the contemplated financing would have on the total present debt and debt service requirements.

- (f) Relationship of bond maturities to the estimated life of improvements for which the bonds are issued.
 - (g) The size, cause, and trend of floating debt.
 - (h) Relationship of tax limitations to current tax rates.
 - (i) Legal priority to tax collections by overlapping municipal authorities.
3. What factors are considered in determining the adequacy of the provision for retirement of bonds?
4. Distinguish between a constitutional and a statutory limit on taxes that may be levied by a municipality. Discuss the importance of a tax limit.
5. In reviewing current operations of a municipality, explain the significance attached to:
- (a) Percentage of current ad valorem taxes collected during the year of levy.
 - (b) Provision for reserves or cushions in the annual budgets for anticipated delinquencies.
 - (c) Statutory provisions for adequate penalties for nonpayment of taxes when due.
 - (d) Regular holding of tax sales as provided for by laws.
6. How are operating deficits of municipalities paid?
7. In considering the current over-all tax rate, state why it is essential to also consider:
- (a) The basis on which property is assessed for tax purposes.
 - (b) The tax rates which the municipality has successfully paid in the past.
 - (c) Tax rates of similar communities.
8. What authority is exercised by some states to control the financial practices of their municipalities?
9. What danger exists in the establishment of a precedent by a municipality of unnecessarily refunding a part of the annual maturity of outstanding bonds so as to keep the tax rate down?
10. What are the more important features included in an attorney's opinion regarding the legality of a municipal issue?
11. Under what conditions are "preliminary legal opinions" issued on the validity of municipal bonds?
12. Why is the enforcement of debt collection in the event of default by a state more difficult than the enforcement of debt collection from a municipality?
13. What are the principal sources of revenue of a municipality? Of a state?
14. Give examples of municipalities which have defaulted in the past and the circumstances leading to the default.
15. What is the meaning of the term "authority" in municipal financing?
16. Define: municipal revenue bonds; special assessment bonds.
17. Under what conditions are revenue bonds issued in lieu of general obligation bonds?
18. What is the general order of application of revenues derived from properties which are financed by revenue bonds?
19. What considerations govern the determination of the maturity provisions of revenue bonds?

20. How is the average selling price and bid price for a municipal series issue computed?

21. How is the net interest cost of a serial issue with split interest rates computed?

22. How is the average life of serial bonds computed?

23. How is the net interest cost of a serial issue with a single interest rate computed?

FOREIGN BONDS AND DIRECT FOREIGN INVESTMENT

by Victor Schoepperle, *Vice President, National City Bank
of New York*

IN INTERNATIONAL FINANCE there are no experts; there are merely degrees of experience, usually highly specialized experience. There are technicians, of course; there are foreign exchange traders, importers, exporters, bankers. There are fiscal experts, tariff experts, and statisticians, but there is no one who grasps the subject as a whole. There is no single "expert" in this field.

In the title of this discussion a distinction is intentionally made between foreign bonds and direct foreign investment. Foreign bonds issued in the United States 1920-1940 amounted to ten billions of dollars more or less. The Department of Commerce estimates 8½ billions net between 1920 and 1940; this is after subtracting refunding during the two decades. As of December 31, 1945, according to the Institute of International Finance, there were \$4,863,081,625 outstanding. It appears that half of these may be held abroad.

Foreign bonds make up the bulk of our "portfolio" investment. A portfolio investment, usually fixed-interest-bearing, is one in which the American investor has placed his funds in *other than American control*, that is, where he has lent his money abroad and where he depends solely on the foreign obligor to pay it back.

In contrast, our direct foreign investments, made in the main by American corporations, are, as far as the American investor is concerned, investments in which *control is retained in the United States*. For example, American holdings in public utilities abroad, in mines, plantations, manufacturers, or even in real estate, are direct investments if the control is domiciled in the United States. Many American corporations, of which a number of examples will readily come to mind, have subsidiaries or branches in foreign countries. These are also direct investments; the control is domiciled in the United States.¹

¹ The term "indirect investment" is sometimes used to describe *other than direct*

FOREIGN BONDS

There are two general classes of foreign bonds: First, those of governments, states, provinces, cities, or other administrative divisions, along with those of certain governmental organizations that are officially guaranteed.

Second, those of foreign nationals, that is, of private corporations, railroads, utilities, and so forth. Private borrowers, that is, foreign nationals, have never been numerous in American lending operations, Canada excepted. Credit criteria on private borrowers in the foreign field are almost the same criteria used in judging domestic borrowers, except that a new and primary complication is present in the *foreign exchange problem*. Obligations of private borrowers can be collected in the currency of the country if legal remedies are available to creditors; but this has been subject to government abuse on the ground of "national interest" or exchange stringency. The creditor may obtain the contractual amounts due in foreign currency and be *prevented* from converting it into dollars on any terms.

THE BASIC TEST

The basic test of any foreign dollar bond is the amount of dollar exchange available to provide for the future payments of interest, sinking funds when due, and principal at maturity. This basic test requires an understanding of how dollar exchange becomes available to a foreign borrower, that is, how a nation acquires the capacity to pay in foreign currencies.

CAPACITY TO PAY

The simplest way for a country, A, to acquire dollars, of course, is to sell its products to the United States; conversely, this depends on the extent to which we buy from A as well as from other countries, B, C, D, and so forth. And we *have to buy something* if we expect to receive from others the interest and principal on our foreign credits or foreign loans. But foreign goods sold to the American market are produced not by governments but by private producers. Governments making payments in the United States usually buy dollars received by their exporters; this they do through banks. Private borrowers normally follow the

investment. Whoever invented the term "indirect investment" did so, apparently, in contradistinction to direct investment; he may have intended to describe stock holdings in foreign companies where the control is foreign, for example, an American owns a few shares of a British nitrate company, which in turn is controlled by a Chilean nitrate concern, incorporated in Chile but owned in the United States. Does this American hold a portfolio, or a direct, or an indirect investment? But such "indirect investments" are sometimes classified by the Department of Commerce as "portfolio investments." There is, however, no need to ponder over this inexact and confusing terminology.

same procedure, but sometimes they themselves produce *for export* and thus create exchange; mining companies producing oil, gold, silver, copper, nitrate are conspicuous examples.

Aside from the general ability thus to command dollars, a secondary test of capacity to pay should, of course, be made in the usual way by studying the revenues and expenditures of the borrower and relating the proposed amount of his contractual debt service to the normal revenues, taking into account the total needs for service of the existing debt, both internal and external, and the probable priorities.

Capacity to pay, therefore, derives from two sources: first, the supply of dollar exchange arising from exports or from other sources, say, for example, capital movements, receipts from tourist expenditures, and so on; and second, the ability of the borrower to supply his own local currency from his revenue account, through his central or other banks, or through the issuance of local securities, with which to buy dollar exchange from those who produce it, or from those who have it or expect to have it.

Since, obviously, the dollar problem is the number one problem everywhere in the world today, this discussion tends to deal with that issue more than with others; this, unfortunately, cannot be avoided.

Capacity to pay therefore embraces two considerations: the all-important availability of dollar exchange and, in turn, the wherewithal to buy dollar exchange, if available.

WILLINGNESS TO PAY

In years gone by it was said that a borrower must not only be able to pay but must also be willing to pay. When defaults of foreign governments began to pile up in the 1930's, more than one government kept asserting its "willingness to pay." A government may have a surplus of local currency and a scarcity of dollar exchange. Or it may have an available supply of dollar exchange and a budget deficit. In these circumstances governments may claim willingness to pay while asserting that they lack capacity to pay. A government that wants to pay will tighten its belt and go in for "austerity," as they do in England; but a nation that is piously protesting its willingness to pay while continuing to import consumers' goods cannot be said to be meeting this second test.

As a result, it is sometimes observed that a nation rich enough to pay will not necessarily honor its debts. Nevertheless, we shall give examples of nations not only willing to pay but also determined to pay.

STATE OF SOCIAL AWARENESS

If there were any experts in international finance, they would probably not agree on the third test, namely, the *state of social awareness in the*

borrowing nation. There was a time when it was considered that a nation which had managed to crystallize its political and social structure on Victorian lines was a safe risk. Most of the foreign lending done during the nineteenth century was done by the London market, and this lending in its most successful aspects tended to export Victorian patterns. After two world wars, however, it begins to look as if most of the Victorian patterns of social and political behavior have failed to survive, and it becomes necessary then to look at the actual state of social awareness everywhere. As it turned out, after World War I it was no longer safe to invest money in securities of governments which attempted to restore a status quo that was not supported by popular opinion. Is it now prudent to lend to governments which are experimenting in new social patterns? Each case would have to be judged individually according to one's insight into national characteristics and one's knowledge of modern history. This is important, since it appears that collectivism or socialism, or broad state authority—all of which are the outcome of present social trends—is likely to be a characteristic problem of this century. The states of social awareness and willingness to pay are closely allied but are not quite the same thing.

NEIGHBORHOOD RISK

The fourth test might be called the "*neighborhood risk*," namely, the question whether the borrowing nation is in an area of international conflict, that is, whether for historical or other reasons either its status or its existing regime may be challenged by its neighbors. Conflicts may be political, territorial, economic, religious, or ideological. They are not necessarily confined to one part of the world.

EXAMPLES OF THE FOREGOING TESTS

After our basic tenet has been stated and after our four tests have been postulated, it must still be admitted that less is known about foreign bonds and the factors in the international credit equation than about domestic bonds and the factors in almost any domestic credit equation.

Let us now go back over the above tests and look at some examples.

I. *Capacity to pay.* On the point of capacity to pay in dollars, the Cuban economy derives from sugar exports to the United States over \$250,000,000 a year in dollar exchange. This is a simple illustration of probable capacity to pay on a bilateral basis, that is, two countries involved, Cuba and the United States.

Turning now to Canada, prewar data indicate that on a bilateral basis Canadian "exports" to the United States in each year are short by over \$100,000,000 of the value of American payments to Canada. In fact, Canada is normally "in the red" on bilateral trade with the United States.

But this does not mean that Canada does not have the capacity to meet the interest and sinking fund payments on Canadian foreign dollar obligations in the United States. The transactions between Canada and the United States have not been the only source of Canadian capacity to pay. Canadian exports, apart from those to the United States, were mainly to the British Empire, so that the payment of Canadian obligations in the United States has rested to a considerable extent on the triangular exchange position of the Canadian dollar, the pound sterling, and the United States dollar. If Canada is normally "in the red" to the United States and to a much greater extent "in the black" to Great Britain, that is to say, if she has created sterling balances through exports and can buy United States dollars with sterling, then her ability to pay in dollars depends in part on the rate of exchange between sterling and dollars.

In spite of the more complicated method of creating capacity to pay in dollars in the case of Canada as contrasted with the case of Cuba, Canadian bonds are rated higher than Cuban bonds. The reasons for this would have to be sought in the other three standard tests under discussion.

II. *Willingness to pay.* Some of us put willingness or determination to pay ahead of capacity to pay in our estimate of the credit standing of a borrower. The man in the street is familiar with the case of Finland, which alone of all the debtors to the United States Treasury has continued to meet her obligations arising out of World War I, with the exception noted below. In the period between the wars Finland had two main sources of dollar exchange: first, export of forest products—chemical wood, pulp, etc.—to the United States and, second, exports of the same products to Great Britain and other parts of the world on a sterling basis. Like Canada, to the extent that she did not produce dollars on direct exports, Finland was able to obtain exchange on the transfer of sterling balances into dollars. Finnish exports to Great Britain and the United States were shut off during World War II; nevertheless, Finland managed to pay her obligations to the United States Treasury until the payments were deferred by public resolutions of the United States Treasury between 1940 and 1942. Recently, after having been defeated in the war, in which she suffered heavily in loss of life as well as loss of territory, Finland has again paid all amounts due. Of publicly offered bond issues, Finland had paid off all five by 1945, three before maturity, all interest having been paid when due. Australia, France, and Eire have paid on the nail, likewise the Netherlands, Switzerland, and Sweden.

It is hardly necessary to introduce further examples. However, it might be pertinent to refer to the cases of Norway and Denmark. Although occupied as a belligerent in the war, Norway found herself able to,

and did, pay out of shipping profits the full interest and sinking funds on Norwegian dollar bonds. Likewise Denmark, although occupied by the enemy, managed by a great effort to find a sufficient amount of dollar exchange, which, needless to say, did not arise out of the export of any Danish products, to pay the continuing interest on dollar obligations, even though unable to pay at maturity a bond issue which fell due in 1942. The City of Antwerp, Belgium, although occupied by the enemy from 1940, promptly after the war made good all unpaid interest and has now paid all sinking funds, thus bringing the amortization to date in accordance with the original agreement.

No one would question the willingness to pay in the case of any of the debtors mentioned, even though one might find one or the other in certain circumstances deficient in capacity to pay.

III. *Social awareness.* When we apply the test of social awareness in a borrowing nation we might ask whether a nation is a good risk whose population is scarcely aware of the existence of its public debt, to say nothing of the existence of international obligations. What can be expected of a population which is not aware of its commitments and where there are wide cleavages among various classes? For example, it is said that in more than one country in Europe—indeed, in some of the greatest capitals of the Old World—in the face of famine, people with money can actually buy almost anything they want. If this is a fact, and it is generally reported to be true, it is indeed a reflection on the state of social awareness. Contrast this with the reports from England which indicate that the average wage-earner seems satisfied that he is getting as much food and clothing as a member of the House of Lords and where the staffs of the great hotels take pride in seeing to it that the regulations governing rationing are observed to the letter. It does not follow that, because people consent to government regulations, there exists a high state of social awareness; but it can hardly be said that there is a sound basis for civic responsibility if the great masses of people are not aware of obligations which governments are undertaking.

It can be said that the Scandinavian countries have developed a high state of social awareness. They are not only willing to pay; their responsibility as nations derives from the almost universal recognition of the citizen's personal responsibility.

IV. *"Dangerous neighborhoods."* As to the fourth test, that is, whether a borrowing nation is in a "dangerous neighborhood," no one will have any difficulty in identifying nations which live in the shadow of a more powerful or a more aggressive neighbor or in the path of an international conflict. Yet Switzerland and Sweden, in such paths, have kept out of trouble. Is it because they enjoy a high state of social awareness?

Might it be said that Greece, Panama, and Iceland are strategic areas? Traditional thinking about all this may have to be revised in the Atomic Age.

THE U.S.S.R.

As a laboratory experiment, let us apply all four of our tests to Soviet Russia.

First, as to capacity to pay: It is customary to refer to the vast resources of the U.S.S.R., but vast natural resources exist in many other countries and capacity to pay depends to a large extent on their development. The indications are, judging from the record of Russian exports, that, aside from possible gold supplies from her reputedly large production, she has little capacity to pay in relation to her probable needs. She has, however, complete state control over export and import movement and other factors in her balance of international payments, as a result of which the record of Soviet Russia on her external obligations to date has been perfect. This will seem a surprising statement, considering that pre-Soviet or Imperial Russian government bonds are quoted in the market at bankrupt prices.

Second, as to willingness to pay: It appears that the U.S.S.R. is willing enough to pay debts incurred under the Soviet regime and diametrically opposed to any adjustment on the debts of the Czarist regime. The Czarist debts were incurred in European markets 1880-1900 and in the United States during the period of World War I. Investors, however, cannot be expected to take into account the differentiation which the Soviets make on ideological grounds between the debts which the Soviets incurred after the revolution as contrasted with the debts of Czarist Russia contracted before the revolution. Summing up, one must conclude that Russia is not willing to adopt the traditional patterns followed by most defaulting nations in their efforts to rehabilitate their credit position.

Third, as to the state of social awareness: This is a matter of debate, but it is clear enough that too abrupt a social change in too short a period may be just as uninviting from an investor's point of view as too little change over too long a period. In the case of the U.S.S.R., the investor who bought dollar bonds in the twenties was paid off in gold; but it required an investor with a strong intuition for the subtleties of Marxian philosophy to find the state of social awareness in Soviet Russia reassuring to capitalist investments.

As to the fourth test, that is, the question whether the U.S.S.R. is in a "dangerous neighborhood." The Soviet authorities evidently assume this to be the case. Certainly *it was* the case during World War I and World War II. The question raises imponderable considerations too difficult to

discuss here. This, however, may be as good a place as any to remark that, but for wars and their aftermath, there would be only a moderate need for foreign loans, even though the Marxian argument runs to the view that foreign loans and international investment are forms of imperialism from which wars result.

As an exercise in the four tests the reader might be tempted to consider China as against Japan, or might ponder over the defaulted obligations held in London of the states of Mississippi and Florida, and reach his own conclusions from these defaults dating back to 1838.

BALANCE OF INTERNATIONAL PAYMENTS

In the first examples given in this text an illustration was given of the bilateral position of Canada with the United States and of her multilateral position with the British Empire and the United States. This brings us to a reference to the "balance of international payments," the conventional key to capacity to pay. Stated briefly, a balance of international payments is an attempt to list on one side all the items which run to the credit of the nation in international transactions, that is, the goods and services supplied to other countries, and on the other side all the items which run to its debit, such as goods and services received from other countries, the purpose being to determine how the balance is achieved year by year; for it is an axiom of international finance that in the long run all these outgoings and incomings must balance in one way or another. In London during the war the balance was achieved through the accumulation of "blocked sterling."

The calculations entering into these balances are always approximate, for it is difficult to get precise data. Statistical procedures are not always accurate in showing just what the income and the payments are, even in the simple case of exports and imports of merchandise. In the face of shifting exchange rates and multilateral transactions, it is easy to see how complicated it is to arrive at the net result in a single currency. For many countries no balance of payments is available; and even in the case of the United States, whose government economists have prepared such statements annually for over twenty years, the methods are still being improved and simplified for better understanding. The Department of Commerce has elaborated the United States "balance" in great detail and deserves great credit for this work.

International transactions of the United States cover, first, the money values of goods and services supplied to foreign countries (credit items) and those received from foreign countries (debit items). The net balance is "favorable" to the United States in recent years. Then there are items showing how the credit balance was offset or "financed"—by our outright

contributions through operations of Lend-Lease and through U.N.R.R.A. and by various other gifts, through United States loans and credits, and by capital movements and the use made by other countries of their gold and dollar holdings.

The entries made to debit and credit on this pro forma sheet called the balance of payments, if all factors are taken into consideration, are always in equilibrium. Frequently, however, one hears references to "adverse" or "favorable" balances of payments. These observations are usually based on the trend of current accounts, such as merchandise trade, shipping costs, insurance, tourists' expenditures, and the like. A favorable or adverse position may exist temporarily because of unusual movements one way or another. Such a condition is offset as a rule by capital and credit items that will ultimately be entered under the heading "financing the credit (or debit) balance," as the case may be. If there is a serious and chronic dislocation, it may be due to a change in the volume of trade, in the price of prime commodities, in the rate of interest for money; and its effects will be felt in the dislocation of the rates of foreign exchange or in the standard of living in the country affected. Such cases may occur for either economic or political reasons.

THE EFFECT OF A FOREIGN LOAN

However, returning to the matter of foreign loans, the first effect of a foreign loan involving new money is, of course, to swell temporarily the credit side of the balance of payments of the borrower and to increase the foreign exchange immediately available by the amount of the loan proceeds. It has the same effect in the account as that amount of exports. In subsequent years, however, the debit side will have to carry the annual charge for interest and sinking fund, with the same effect as payment for imports. The question for the investment banker to determine, in issuing foreign bonds, is whether such an addition to the annual burden of payments tends to create a continuing supply of foreign exchange and, if not, whether the burden can be carried without trouble. Reasoning on this point involves an application of our basic tenet; then of the tests already described. Account must be taken also of the prospects for economic development in the borrowing country that may increase its financial strength as years go by.

The inevitable result of a persistent adverse balance of payments, that is, an excess of debits over credits, covered by "borrowing" in some form, is a default in foreign payments, not necessarily in the service of foreign bonds but in debt payments of one kind or another. When these adverse conditions in a foreign country begin to be observed in the outside world, its bonds will fall in market price, even though the danger of a default is

not imminent; and, once a default occurs, experience has proved that it is a long and tiresome procedure to get a default corrected. Because the accumulation of back, unpaid interest soon runs into substantial amounts, the longer the default exists the more difficult it is for the debtor to make an adjustment. There is occasionally, as we have seen, a noteworthy exception to this generalization.

SPECIAL TAX FEATURE OF FOREIGN BONDS

The income from foreign dollar bonds is not, of course, exempt from United States federal or state income taxes if the bonds are held by an American citizen. Such income is, however, exempt from our income taxes if the dollar bonds are owned by aliens, unless the latter are residents of the United States.

This tax exemption explains to some extent why foreign dollar bonds were so successfully issued to the market in the United States during the period 1922-1931. A very considerable proportion of foreign dollar bond offerings was taken up in those years by persons who were not citizens or subject to the laws of the United States, that is to say, persons residing abroad and who may have had portfolios of dollar securities, thus subject to no American taxes although productive of dollar income.

REPATRIATION

In fact, a surprising proportion of foreign bonds currently serviced and in good standing are held outside the United States. These holdings represent legitimate investment and are not to be considered as having been repatriated in the derogatory sense in which the word "repatriation" is sometimes heard in foreign bond circles. The term *repatriation* refers to those cases where bonds of a debtor country have been bought by investors and institutions of the debtor country. This procedure is constructive, particularly where the terms of the bond have been met punctually, that is, where the interest and sinking fund payments have been remitted by the debtor on the basis of the original contractual terms. The investor thus derives dollar income from investments in bonds of his own country. This is legitimate repatriation and it is a good thing, even though the bonds have been acquired or repatriated at depressed prices.

There is, of course, another type of "repatriation," by which a debtor government in default proceeds to buy at default prices its own obligations with a view ultimately to making a settlement for the relatively small remainder. If a debtor has the means with which to "buy in" his defaulted bonds, he is to that extent admitting that he could pay interest on outstanding obligations. "Buying in" in such circumstances is compounding the default.

For the adjustment of defaults in foreign government bonds there was organized in 1933 the Foreign Bondholders Protective Council, which has been instrumental in arranging renewal of service of defaulted foreign government bonds, usually at a reduced rate of interest. A similar organization in London has been in existence since 1868.

DEFAULTS OF THE 1930's

A strict and proper definition of default is any infringement by the obligor upon the terms of the loan contract. During the 1930's there were many such defaults, but they included readjustment of interest rates, delays in sinking funds, resumptions and later renewal of service, and similar irregularities that showed on the part of debtors and bankers an effort to maintain some kind of control during those difficult times. The record was not altogether bad, especially when one considers also the troubles in the domestic investment field. But the manner of conducting the political investigation of foreign lending in 1933 and 1934 discredited foreign bonds with the general public. The private investor forgets that some of his dollar bonds were repaid; naturally he does not forget the defaults on bonds he still holds. In 1939 it was estimated by a committee of the League of Nations that, of the total amount of external issues outstanding in the London market, the most experienced and seasoned in the world, not more than 30 per cent was in default; and the corresponding figure in the New York market was 40 per cent. In 1945 the Committee on Postwar Economic Policy and Planning of the House of Representatives² presented a study of our foreign investing from 1920 to 1940 as prepared by the Department of Commerce. Here the statement is made that "up to the end of 1935, debt service was paid in full on more than three-fifths of all outstanding foreign dollar bonds." On many, of course, partial or reduced service was maintained or was in process of negotiation. The same study, looking at our foreign bond experience from this over-all viewpoint, estimated that from 1920 to 1940 the total received from our portfolio investment abroad (that is, excluding direct investments in business and property) was one and one-half billion dollars in excess of our investments. That is, our economy was better off by one billion five hundred million dollars. The method of footing up the account is scarcely one to satisfy an investor whose particular holdings are still in default. It should be noted that our government is now favorably disposed toward foreign lending as an indispensable part of world recuperation.

The American banker of the 1920's can claim that, as far as the private investor was concerned, the bankers' recommendation proved sound, in

² House Report No. 541, 1945.

spite of great world troubles, as those involving Great Britain, the Irish Free State, the Dominion of Canada, the Commonwealth of Australia, France, Switzerland, Holland, the Dutch East Indies, Belgium, Norway, Sweden, Denmark, and, until they were overrun, Finland, Czechoslovakia, and Austria. There is quite a lot in this record to encourage the investment community. There are obviously some good foreign bonds.

CRITICAL COMMENT

In juxtaposition to this conclusion we place two critical comments by eminent authorities to whom the text of this article was submitted. The first is by Garrard B. Winston, Secretary of World War Foreign Debt Commission, 1923-1926:

So far as governmental obligations are concerned, the only way they can be collected in the ultimate analysis is by force. If they are obligations of a *foreign national*, they can be collected at least in the currency of the country if there are appropriate civilian remedies, but even this is subject to interference by the foreign government, as witness the legal difficulties encountered by creditors on German private loans with the imposition of the "Stand-still Agreement." When it comes to converting realization of the loans of foreign nationals into dollars or the payment by the foreign government of dollars, we then run into capacity to pay and willingness to pay. Capacity to pay is a fiscal matter but willingness to pay is largely a question of pressure from the creditor country. For example, the support heretofore given by England to British lenders and the failure of such support by the American Administration. There are a lot of countries who have the capacity to pay but don't do it. This must be true of several South American countries; and there are countries who do not have the capacity but still make payments, as for example Finland.

On the whole, to me the real difference between a local bond and a foreign bond is that if the Commonwealth Edison doesn't pay, you can take it over or have it reorganized and if the money is there you can get it out. If the Rhine Westphalia doesn't pay, the German remedies may not be adequate and when you get through you will have only marks, which you might not be able to transfer. If the bond is a United States bond or a Peruvian bond, all you have is the good will of the government and its desire to maintain its own credit. States in this country have repudiated their debts and the United States Government has repudiated the gold obligation.³

The second authority is James Grafton Rogers, president of the Foreign Bondholders Protective Council, Inc.:

There are two factors which you do not emphasize in evaluating foreign government bonds, and which may, in the future, become significant, although hardly mentioned in the past.

³ Garrard B. Winston, Shearman & Sterling & Wright, New York, former Under Secretary of the United States Treasury; Secretary of World War Foreign Debt Commission, 1923-1926.

1. *A nation's total indebtedness.* This applies both to foreign and domestic debt, although, of course, especially to the former. In hard times the service of debt, which is fixed, becomes a most difficult problem. Debt service is not popular. It can seldom be reduced by the nation itself. Default in debt service is the easiest solution for an unbalanced budget. If the service burden is proportionately big, say 25 per cent or more of national budget expenditures or some such proportion of the normal call on foreign exchange, there is great temptation for a government. The default is usually in foreign debt because the consequences, financial and political, are usually more remote and delayed abroad than at home.

We have some countries with excellent credit now whose debt burden is dangerously high. As for the past, Chile got extended too far, as I see it, although mismanagement as well as too much borrowing is responsible for her present bad estate. Her credit once was golden. Indeed overborrowing by a country is usually a corollary of good credit.

2. *The character of a nation's indebtedness.* Speaking roughly, the debt demands on foreign exchange have been in the past chiefly for short-term bank credits, long-term public bond issues and, in a few cases, war reparations and indemnities. War claims have been an important factor only with Germany, Turkey, and China, so the demand for exchange in practice has been purely commercial in the normal cases. Today two new classes of indebtedness enter the scene. One is intergovernmental debt—that is, sums due another government (usually the U.S.A. or Great Britain) for advances. There are few countries in the world now free of such obligations. In the case of the U.S.A., debts are due us for lend-lease, for purchase of army surpluses, and for Export-Import loans on every side. The second new type of debt which will compete with publicly held bonds promises to be the loans made by the International Bank.

What are the priorities, legal or actual, between such debts and bonds held by the public? The past seems to indicate that intergovernmental debts are the most readily deferred, short-term credits next, and publicly held bonds last, but that priorities have been asserted in exactly the opposite order. The legal position is of negligible importance so far. The question hinges on practical and political elements. But whatever the priorities, the character and amount of the intergovernmental debts becomes a major factor in national credit.

For example, Czechoslovakia has been resuming service on her publicly held bonds on very creditable terms. But her total exterior debt of this character is in the order of \$10 million, while she owes the British Government twice that sum perhaps, owes the Soviet something still unpublished it seems, and is seeking to borrow double all the foregoing from the Export-Import Bank. These government debts are the problem, and not only in quantity.

Under "state of social awareness" it occurs to me that the degree of contact with or immersion in the traditions of western Europe is a pretty good guide to the attitude of a nation toward its debts. In South America, Argentina, Uruguay, and formerly Chile had the best debt records and were also the countries most settled by immigrants from northwest Europe. On the other end of the scale, Ecuador, Bolivia, and Mexico, the three most purely Indian nations, have had dreadful debt histories. The countries of northwest Europe are nearly all reliable except Germany, and her trouble is war, not commercial dishonesty. Prior to World War II Czechoslovakia and Poland were the only eastern European ("Balkan") nations with good credit records; both were deeply tied to

Great Britain, France, and the U.S.A. in sentiment. The pattern is not perfect, but one is impressed with the influence of the commercial tradition.⁴

DIRECT INVESTMENTS

Direct investments, it will be remembered, are investments the control of which is domiciled in the United States. These run to the magnitude of seven billions, of which about one third are in Canada. In order of importance they consist of manufactures, public utilities, and transportation, petroleum, mining and smelting, distribution, agriculture, paper and pulp, and miscellaneous.⁵ These investments usually take the form of foreign subsidiaries of American corporations. They are more important than portfolio investments—more important to Americans, because for the most part Americans run them; and more important to foreigners, because we Americans make to that extent current economic contributions to the countries in which they operate. If the standard of living throughout the world is to be raised, more of these direct investments will be necessary.

But they are subject to the same risks, more or less, as the investments discussed in the first part of this chapter. When there is a deficit in the current balance of payments, that is, a shortage of dollars, the easiest way for a government to obtain dollars is not to pay them out to those creditors who can be put off. This results in competition for the available dollars as between portfolio investors and direct investors. This is an unequal conflict, since the direct investor is on the ground, awake and alive to the danger, while the portfolio investor is usually unaware of what is going on. As a result, the bondholder has sometimes been left out in the rain.

There is a further complication. The exporter who has goods to ship is not likely to retire from business as long as his customers are willing to buy his goods; hence the exporter to a deficit country makes no contribution toward stabilizing a deteriorating exchange. This gives rise to exchange controls, a device adopted by governments to regulate exchange, that is, to decide who gets what and when. Since consumers exercise a strong pull on governments, and since importers and merchants are on the job every day, not many governments are inclined to deny the allocation of exchange to current business; this puts the investor in the position of having to wait. Direct investments, both while being made and while being successfully managed, tend in general to aid rather than to harm portfolio commitments. They tend to help if they create an export or reduce the need for import.

⁴ James Grafton Rogers, lawyer; President, Foreign Bondholders Protective Council, Inc.; former Assistant Secretary of State.

⁵ U. S. Department of Commerce, "American Direct Investments in Foreign Countries," 1940.

Yet there is an even worse complication. American companies abroad have more recently, as in Mexico and Chile, been the chief sources of production for export, hence of dollar exchange; governments have not hesitated to demand dollars by a device little understood, known as "official rates" of exchange. These rates are invariably less advantageous to the foreign producer than the going market rates. The effect is to tax on a discriminatory basis if not to confiscate part of the earnings of foreign corporations. This form of subtle expropriation is a detriment to international investment of any description.

The most obvious direct investments of United States corporations are in oil, sugar, rubber, copper, pulp;⁶ but our direct investments exhibit a wide variety of forms and are more extensive than most people are aware of. Manufactures alone are estimated at \$1,618,000,000, with public utilities and transportation at \$1,514,000,000. The geographical distribution of American enterprises is world-wide.

MIXED CAPITAL INVESTMENTS

Making a direct investment takes (1) capital, (2) technical proficiency, (3) time; and today it needs protection against nationalistic measures designed to place foreign capital at a disadvantage in competition with home capital. The problem is being resolved in Latin America by forming mixed capital ventures in which the nationals of a foreign country take a substantial if not controlling interest. Sometimes the American interest will be contributed in the form of engineering, technical direction, construction, and management; in other cases, established enterprises in Latin American countries will accept American capital participation on a minority basis, thereby retaining control at home and obtaining the benefits of American techniques and the continuous research facilities that go with the industry. In the past few years such mixed investments by American companies have been made in chemicals, textiles, glass, rubber, shoes, and metalware; in some cases Americans have taken a minority interest and in others a majority control.

THE NEW INTERNATIONAL BANK AND THE MONETARY FUND

With the organization of the United Nations, a student of international finance should keep in view the developments under the United Nations program, namely: (1) the policies to be pursued by the International Trade Organization, which it is hoped may be able to take measures to restore multilateral trade; (2) the policies to be pursued by the International Bank for Reconstruction and Development, which it is expected will make long-term loans in member countries for productive purposes;

⁶ For example, Standard Oil Company of New Jersey, Cuban-American Sugar, United States Rubber, and Anaconda Copper.

and (3) the policies to be pursued by the International Monetary Fund, which will have to do with the problem of maintaining stability of currencies. Currency stability among all countries can be attained only when every nation participating in the Fund finds a way to free itself of a persistently passive or active tendency in its balance of payments and to contribute toward a general equilibrium. The United States should seek to make these inevitable balances balance constructively; otherwise its own balance will be attained by "forced" loans.

The organization of the International Bank is of tremendous interest to the investment and the business community. It holds great possibilities in the sense that for the first time restraints could easily be placed through the Bank and the Monetary Fund on immoderate borrowing and irresponsible monetary management, matters which should not be left to the vagaries of politics, domestic or international. If investors are to be repaid, and if exporters are to keep on doing business, we shall need these institutions. One, however, cannot function without the other; each is part of the other.

Since the Bank will make loans which are not obtainable otherwise in the market, its investments should be mainly "direct," at least in those cases where the borrower is on the border line of credit. The Bank's "portfolio" investments should be restricted to governments which meet the basic tenet of this discussion and which respond favorably to the four tests. Its "direct" investments will have to be watched by the Bank's organization on the ground, not in Washington. Its organization will have to extend from China to Peru.

Instead of giving data on the Bank's plans readily obtainable elsewhere, it may be pertinent to show by example how it might work toward international equilibrium, for equilibrium is the all-compelling necessity if any of our beliefs or assumptions on international lending are ultimately workable.

As a hypothetical case, suppose that the American and British Zones of Germany are put together as a new state. The new state is called Middle Europe; it is self-governing to some extent, controlled at the top by a British-American Council, but is free to develop its own economy.

The new state has undertaken to pay at least something on the prewar governmental debts of Germany, and has recognized the legal rights of private investors who hold prewar bonds secured by agricultural mortgages, electric and gas works, manufacturing establishments, and so on. Its currency is tied into the Monetary Fund, and it owes the International Bank \$10,000,000 and the Export-Import Bank a similar amount. Some of this is due in the current year. But, in addition to importing raw materials for processing and export, Middle Europe is importing con-

sumers' goods. There is a disposition to let the debts go by default. An internal political situation has raised into power an extravagant regime. There is danger that maturing obligations will be set aside in order to meet current demands for gasoline, sugar, coffee, things which people so badly want; not only that, the government expenditures are running far ahead of receipts.

If there are good reasons for the state of affairs and grounds for anticipating an improvement, the Monetary Fund can extend temporary accommodation. The Bank might make direct investment in new productive enterprise. If the state of affairs is obviously deteriorating, the director of the Monetary Fund, in daily contact with all central banks, can soon let the minister of finance know that the Fund—and, by the same token, the Bank—no longer regards the position as a satisfactory one. If measures can be taken to bring the situation back into equilibrium, the managers of the Monetary Fund might make an intercession with the Bank, but if nothing is done to arrest the deterioration, the Fund will be obliged to consider a revaluation of the rate at which the currency is accepted by the Fund. A government faced with such an alternative would either have to put things right, devalue, or see its currency excluded from international transactions. The choice has to be made sooner or later. Any extreme is bound to have disastrous consequences; hence, the necessity for maintaining equilibrium at all costs.

This assumes that the Fund and the Bank will have at all times information concerning the current foreign liabilities of governments and their nationals. In this way instability in the balance of international payments can be diagnosed and anticipated, and if the system works, defaults in foreign payments can be prevented. This would place foreign bonds and international investment on a new basis. Unless something like this is possible, the appearance of a "deficit" in the balance of international payments of any debtor nation gives rise to an unhealthy situation for creditors in that area. The chance, therefore, for obtaining a degree of international balance through the Monetary Fund should not be lost.

This is not to say that the Fund and the Bank will be successful in bringing about international stability. They may succeed. If not, something else will have to be tried. The problem is always with us; it cannot be solved by atomic energy.

International economic equilibrium, like Christianity, democracy, or chess, is a challenge to human aspiration; we shall always in some measure fail and in some measure stumble ahead. When it became evident that London could no longer do its work of stabilizing world payments single-handed, Edward Hallett Carr had this to say on international lending:

The international financial system which flourished until 1914 is often spoken of as if it had operated to the profit and advantage of everyone concerned. This system, in fact, involved a continuous flow of loans from Great Britain and certain other countries (especially France), the repayment of which was provided for when the time came by further loans; and when this cumulative process came to an end, default was the inevitable result. The advantages of the pre-1914 international financial system were paid for in the end by the British and French investors who lost their millions in South America or in Russia. The system seemed profitable to all only because those who benefited from it succeeded in unloading the cost on posterity. The process by which Germany was enabled to pay reparations between 1914 and 1930 was no novel phenomenon, but a repetition on a small and short-term scale of the process by which nineteenth-century borrower countries had regularly been enabled to pay their debts. It is not certain that the same confidence trick can be played again. If it cannot, it seems probable that those who occupy the most privileged position within any international financial system will be obliged from time to time to make deliberate sacrifices in order to make the system work; and these liabilities, like money spent on relief, must be regarded either as the discharge of a moral obligation or an insurance premium for the maintenance of civilization.

Perhaps it would be better to make one more try before accepting this pessimistic conclusion. There is at least this much hope: as against the natural tendency of bankers to believe that the disequilibrium will be chronic, we may wake up to our responsibilities as a creditor nation. There is the added chance that the United States will import more goods and services than ever before. When the postwar needs for reconstruction are met, we may find ourselves losing our big export markets in cotton, wheat, and copper; severe competition in oil seems to be in prospect; so that ten years hence there may be no dollar problem. This will put international investment on a new footing.

International comity and peace lie in the balance.

REVIEW QUESTIONS

1. Distinguish between "portfolio" and "direct" foreign investments.
2. What are the two general classes of foreign bonds?
3. What factors must be considered in judging the capacity of a foreign borrower to repay a loan?
4. How can one judge "the willingness to pay" of a foreign borrower?
5. Of what importance is "the state of social awareness in the borrowing nation" in evaluating a credit risk?
6. Of what importance is the geographical location or "neighborhood risk" in evaluating a credit risk?
7. How are balances of international trade computed?
8. What effect does a foreign loan have on the balance of trade of the borrower?
9. What special tax feature has led to buying of foreign dollar bonds by aliens?

10. Give examples of countries which have never defaulted on their publicly held debt.
11. How can foreign government prevent interest on a foreign national bond from reaching its American owner?
12. What is meant by "buying-in" repatriation?
13. What is the Foreign Bondholders Protective Council? When was it formed and what is its purpose?
14. What is a "mixed capital" investment? Give an example.
15. Explain how the International Bank for Reconstruction and Development and the International Monetary Fund will cooperate to achieve international economic equilibrium.

CORPORATE FAILURE, RECAPITALIZATIONS, AND READJUSTMENTS

*by Dr. Louis P. Starkweather, Lecturer in
Finance, Graduate School of Business Admin-
istration, New York University; Professor of
Finance, Rutgers University*

THE PROBLEM of bankruptcy and insolvency is an age-old problem, and in early English history failure to pay debts was considered to be a very serious offense subject to capital punishment. Gradually the form of punishment came to be modified and offenders were consigned to debtor prisons where they remained until their debts were paid by relatives or friends. This offered no solution of the problem, however, and it then became the practice for debtors to be sent to colonial America and Australia in bond where it was possible for them to work off their obligations.

Even later the English law became further modified and a distinction was made between criminal bankruptcy and bankruptcy which did not have a criminal basis. Further, it was recognized that a basis for a civil discharge of bankruptcy could be developed.

In the United States, the question of whether the states would have the right to legislate on matters of bankruptcy or whether this right should be reserved to the federal government, came up at an early date. Finally in 1800 Congress enacted a uniform bankruptcy law and passed subsequent bankruptcy acts in 1841 and 1867, each of which was in existence for only a few years. During this period the states continued to have their own laws governing bankruptcies, receiverships, and so forth.

Ultimately in 1898 a bankruptcy act was passed and put into effect, and this basic act is still in force at present. This act has been amended many times, the most extensive amendments having been made since 1932.

The old point of view with respect to bankruptcy is summed up in the Bankruptcy Act as it still exists: namely, the act was a creditors' measure designed basically for their protection. The theory was that if the debtor

was insolvent and he was unable to manage his affairs properly, a trustee or receiver was appointed by the court to take over the debtor's assets and administer them for the benefit, basically, of the creditors.

NEW CONCEPTS

A basic change in attitude occurred with the advent of the New Deal, and in 1933 an act known as the Debtors' Relief Act was passed which became known as the Chandler Act. Thus, a new concept of bankruptcy and failure came into existence based on the principle that under Chapters X and XI and Section 77-B of the Bankruptcy Act a debtor could "petition for relief if insolvent or if unable to meet its debts as they mature."

Prior to that time, under the old Bankruptcy Act, the debtor was either thrown into bankruptcy or receivership by a hostile creditor, or the debtor would throw himself upon the mercy of the court. Under the new concept the emphasis was shifted to relief for the debtor. He could initiate the action, he could retain control of his property, and he could be appointed receiver or trustee if the court so decided.

Before considering in detail the position of creditors and debtors under the present law, it should be mentioned that this change in the law has developed two concepts of corporate failure. First, there is the concept of failure in the old sense of insolvency whereby a debtor is deemed to be insolvent whenever the aggregate of his property is not sufficient in amount at a fair valuation to pay his outstanding debts. Second, there is the concept of financial embarrassment and failure whereby a corporation is deemed to be a failure if it is unable to meet its debts as they mature. Thus it may be said that a business failure is not necessarily one that is a complete, legal, confirmed insolvency, but may still be a failure if it is not earning an adequate return on its investment. This is called an *economic failure*. And if an economic failure reaches a stage where there is inadequate cash to meet maturing obligations, it becomes what may be termed a *financial failure* and relief must be provided.

At present, the principal chapters in the Bankruptcy Law applicable to investors, several of which shall be discussed in detail subsequently, are:

1. Chapters X and XI, which superseded Section 77-B.
2. Section 77, which is applicable to railroads.
3. Chapter IX, which relates to debt readjustment of taxing districts.
4. Chapter XII, which governs real property arrangement for others than corporations.

MAGNITUDE OF THE FAILURE PROBLEM

The magnitude of the business failure problem in the United States may be appreciated if the bankruptcy record for the 18 years ending

June 30, 1937, is considered. Briefly, during that period there were approximately 858,000 bankruptcies, and of these bankruptcies 521,000 were without assets. The total liabilities involved were \$16,510,000,000 and the total paid to creditors was \$1,039,066,000, or 6.29 cents per dollar of debt. Thus, the losses to creditors were more than \$15,400,000,000 and the losses to equity holders were undoubtedly substantially greater.

It is of extreme importance, then, that we understand the broad underlying causes of failure and the related problems.

UNDERLYING CAUSES OF FAILURE

There are several basic underlying causes of business failures which should be distinguished from the specific causes of failure. Important among these causes is the unlimited right of any individual to go into business. Frequently this results in unqualified individuals engaging in business, in poorly conceived ventures and in unsound financing. As a cause of failure this is particularly applicable to small business enterprises of \$100,000 net worth or less, a group in which the vast bulk of bankruptcies occur.

A second cause may be said to arise out of intensified competition. It should be pointed out, however, that competition of itself is not a cause for failure, the important factor being the degree, intensity, and nature of the competition. Generally speaking, it is found that competition instead of being a basic cause of failure is usually an excuse for failure.

A third basic cause may be found in business changes and improvements. There is a continual introduction of new inventions, new ideas, and products, new methods of production and distribution. Obviously, companies which are unable to keep step with these changes are in vulnerable positions.

A fourth basic cause of extreme importance lies in the ease with which credit may be obtained. In many instances creditors have been the major cause of bankruptcies simply by overselling the debtor on easy credit terms. Overbuying of commodities and overexpansion of plant facilities as a result of such practices are frequently direct causes of failure.

A fifth cause is the ease with which debts may be discharged, and this probably points to an inherent weakness in our bankruptcy laws. As was noted previously, the whole philosophy of the present law emphasizes the matter of relief for the debtor. Consequently, there has come to be very little if any stigma attached to failure, and this has led to abuse of the bankruptcy procedure. Then, of course, there have been instances of the so-called bankruptcy rings and many instances of sharp legal practice.

Finally, there is the factor of the business cycle, which is often cited as

a typical cause of failure. Here again this factor is often used as an excuse and is not a real cause for failure. Every businessman should know that our economy will have its ups and downs; that in some periods there will be inflation and in others deflation; that there will be expansion and contraction. Thus, the general business cycle is a pattern within which all businesses must inevitably operate.

More important than the general business cycle is the question of the trend of the cycle in individual industries. This is true because it is possible to have certain lines of industry fully depressed simultaneously with a fairly high level of general business prosperity. The reverse is also true, and from a creditor's standpoint, from an investor's standpoint, from a management standpoint it is of extreme importance to determine the trend of the specific industry in question. This applies not only to the growth factors in the industry but also to the cyclical trends within that industry.

Then, of course, there is the problem of changes in the price level; however, it is management's job to meet such changes. A smart management does it and a poor management does not. This again is not a cause, but is many times merely an excuse in cases where the management has not anticipated developments.

STAGES OF FAILURE

There are several stages of business failure ranging in seriousness from economic failure to confirmed insolvency.

Economic failure does not require suspension of business nor does it imply losses to the creditors. It does, however, imply a failure on the part of the enterprise to satisfy an economic demand and a failure to earn an adequate return for the business risks involved. Such a condition may exist when outwardly a concern may appear to be active and solvent. It is characteristic of this stage that the enterprise involved gradually loses ground and drifts in the direction of financial and legal failure unless the situation is recognized and more serious stages of failure avoided.

Financial failure involves actual losses to creditors without suspension of business activities. In this stage working capital is definitely impaired, earnings are clearly inadequate, and financial standards generally are broken down with consequent damage to credit standing and loss of good will. The situation is further often characterized by labor and management difficulties. In many cases the causes for this condition may be eliminated by voluntary financial adjustments and changes in management without the necessity for legal proceedings.

The final stage of failure is legal failure or insolvency, which in itself

may be classified further into reorganizable insolvency, financial insolvency, and confirmed insolvency. As has been noted, insolvency may simply denote an inability to meet maturing liabilities, and this type of insolvency is amenable to reorganization. On the other hand, confirmed insolvency denotes insufficient assets to satisfy creditor liabilities. This type of insolvency lacks the essentials for sound reorganization.

Reorganizable insolvency which is purely a case of financial embarrassment is characterized by a weak current position, badly frozen current assets, and an excessive and immediately maturing funded debt. There is usually an impairment of capital, although the aggregate assets at fair value exceed the creditor liabilities. In such a situation reorganization may be carried out with or without a receiver and trustee, although recapitalization and thorough internal reorganization are usually necessary. An outstanding example of this type of insolvency was the American Chicle Company, which was successfully reorganized under a voting trust agreement in 1922 and which, under new management, has developed into a highly successful enterprise.

Financial insolvency represents a more serious condition of failure. In this type of failure, working capital is seriously impaired and there is a net worth deficit to the extent that there is a complete loss of capital and surplus. However, as distinguished from confirmed insolvency, the economic and competitive possibilities are still good and the assets are still capable of substantial earning power. If these latter factors are present, the situation may lend itself to drastic reorganization, generally with a receivership. In such a reorganization, the financial objective should be a heavy scaling down or elimination of fixed charges. It is frequently necessary to levy assessments on the existing stock and, in any event, a substantial investment of new capital is required.

An example of this type of insolvency was the Servel Corporation, which was put through an extremely successful reorganization. In this case it is important to note that the outlook for the industry at the time of reorganization was extremely favorable. Further, the company had obtained the basic patents on the gas refrigerator and had an excellent product from a competitive point of view. It was evident that, if the financial plan could be substantially revised, and if new and competent management could be brought in, the reorganization would be successful though drastic.

Confirmed insolvency presents a hopeless situation. In this stage the corporation involved is found to be hopelessly bankrupt, financially embarrassed, and insolvent. The assets are usually of doubtful realizable value and the prospects of new capital being put into the business are nonexistent. Generally, the economic and competitive possibilities are

slight. The only remedies available are bankruptcy and complete liquidation with a sale of properties and assets, if possible, either in part or as a whole to some going concern in the same line of business.

DETECTION OF FAILURE TENDENCIES

It is obvious that the prompt detection of what may be termed failure tendencies in order to correct the trend if possible is of extreme importance. It would seem clear that by doing so such things as losses to short-term creditors, defaults in interest and sinking fund requirements, and losses to equity owners in the form of passed dividends could be avoided if corrective measures are applied soon enough. In this way, problems attendant upon financial embarrassment and failure and the complications of legal reorganization and bankruptcy may many times be forestalled. This is true not only as regards management but as regards the investor as well who may, in order to protect himself, dispose of his holdings should the indications be unfavorable.

Ignoring for the moment the actual method used in detecting failure tendencies, it should be mentioned that the responsibility for the detection and correction of these tendencies is incumbent upon several parties at interest. For example, there is of course a high degree of responsibility placed upon the management of an enterprise. Management is responsible first of all for the preparation of adequate financial statements and the preparation of controlling statistics. It is further responsible for the proper interpretation of financial statements and operating statistics as affecting the enterprise with which they are concerned. Management is also responsible for the interpretation of economic and social developments as affecting business and for conducting the enterprise in accordance with those conclusions. It is clear that above all management is responsible for the detection of failure causes, particularly in their earlier stages, although it is true that some causes may be incapable of correction and that some managements are incapable of making the required corrections. For example, some causes of failure, such as ineffective initial promotion of the business or an ineffective reorganization of a business, may be beyond the control of the present operating management. Also, certain external causes such as major disasters and "acts of God" are beyond the control of management. Generally speaking, however, the management is fully responsible outside this area of exception and should be expected to make the necessary corrections.

It is clear also that creditors and investors have an implicit responsibility to detect possible causes of failure. In the first place, these parties should have access to adequate financial data and they should use such data fully in discharging this responsibility. As far as mercantile and

other short-term creditors are concerned, they should neither oversell their customers nor extend credit in excess of legitimate needs and thus contribute to a subsequent failure. In the extension of credit of this type a thorough knowledge of the affairs of the recipient should be insisted upon and should be carefully analyzed, as it is often the case that such creditors take a superficial and even apathetic attitude toward the customer and rely more or less blindly upon the statements of the management. As far as investors are concerned, it seems clear that they should when possible participate actively in the affairs of the companies in which they are interested. In the case of equity owners, they should attend stockholders' meetings when it is practicable for them to do so. Whether they are bondholders or equity owners, it is incumbent upon them to study the available financial data and to follow the trend of business conditions as affecting the company.

Of course the investment banker's responsibility begins prior to the time that a company's securities are distributed to the public and ends only when those securities are no longer in existence. More specifically, the investment banker is responsible for detecting any weaknesses in the initial promotion and the original financing. In the past there have been instances of inadequate investigations of the initial promotion and sponsorings of weak financial plans, with the result that securities of companies organized by irresponsible promoters and with weak banker sponsorship have been distributed to the public. The investment banker generally, however, recognizes his responsibility in this connection and at considerable pains endeavors to prevent such occurrences. Of course the expert advice of the investment banker when conscientiously followed is a protection against excessive debt or overcapitalization. The insistence upon sufficient equity capital in order to avoid a top-heavy debt structure will prevent the first of these. A realistic appraisal of earnings possibilities will prevent the latter.

The investment banker is also in a favorable position to detect weaknesses in management. This may be done through participation in management by representation on the board of directors, enabling the investment banker to detect weaknesses both in financial management and in operating management, as well as to detect unwise financing in connection with plans for refunding or expansion.

METHODS OF DETECTING FAILURE TENDENCIES

It is possible to anticipate and detect an impending failure through two general methods which, for convenience, may be designated as the *internal method* and the *external method*.

Briefly, the external method involves the accumulation of information

from sources outside the business. In other words, trade reports, information regarding the reception the company's product is having, market factors, economic trends in the industry, competitive conditions, and various other indications may all be considered in determining the trend of any particular company. Such information is available from a variety of sources, and it is not necessary to consider this approach to the problem in greater detail at present. A reasonable amount of ingenuity in procuring pertinent information and common sense in evaluating it would seem to be all that is necessary.

Of greater importance, as far as this discussion is concerned, is the internal method, the results of which, when combined with the external approach, should provide the analyst with a reliable indication of a company's problems.

The internal method of detecting failure tendencies centers itself around comparative financial statements and analyses. The procedure is to use comparative balance sheets and comparative income accounts, setting them up on a quarterly basis, using a certain year as a base for analytical purposes and making a trend analysis in terms of the base.

In making a trend analysis of this type, typical balance sheet changes that would reveal a failure tendency would include:

1. A steadily weakening cash position.
2. An overexpansion in receivables or inventories.
3. An increasing current debt.
4. An overexpansion in fixed assets.
5. An inflating capital structure.

The more obvious income account changes would include:

1. A declining sales volume.
2. Increasing operating expenses.
3. Decreasing net profits.

EXAMPLE OF TREND ANALYSIS

The following descriptive data and charts taken from my study of the Studebaker Corporation (New Jersey) (Barron's, July 2, 1934) is an example of trend analysis.

The analyst should select, for continued comparative analysis, data which are pertinent to the operations of the company and its industry. Under this method a particular period, such as the year ended December 31, 1926, for the Studebaker Corporation is taken as a base of 100 per cent, and for subsequent periods changes from year to year are reduced to an index-trend basis and tend to emphasize the fluctuations

through the subsequent increasing or decreasing size of the percentage figure. Such a method of analysis detects such weaknesses as declining sales volume, increasing cost of manufacturing, decline in profits, rapidly increasing funded debt, together with overexpansion of fixed assets and productive capacity which inadequate volume and declining profits failed to justify.

The trend method of analysis when properly used is invaluable in detecting tendencies toward financial embarrassment and failure frequently well in advance

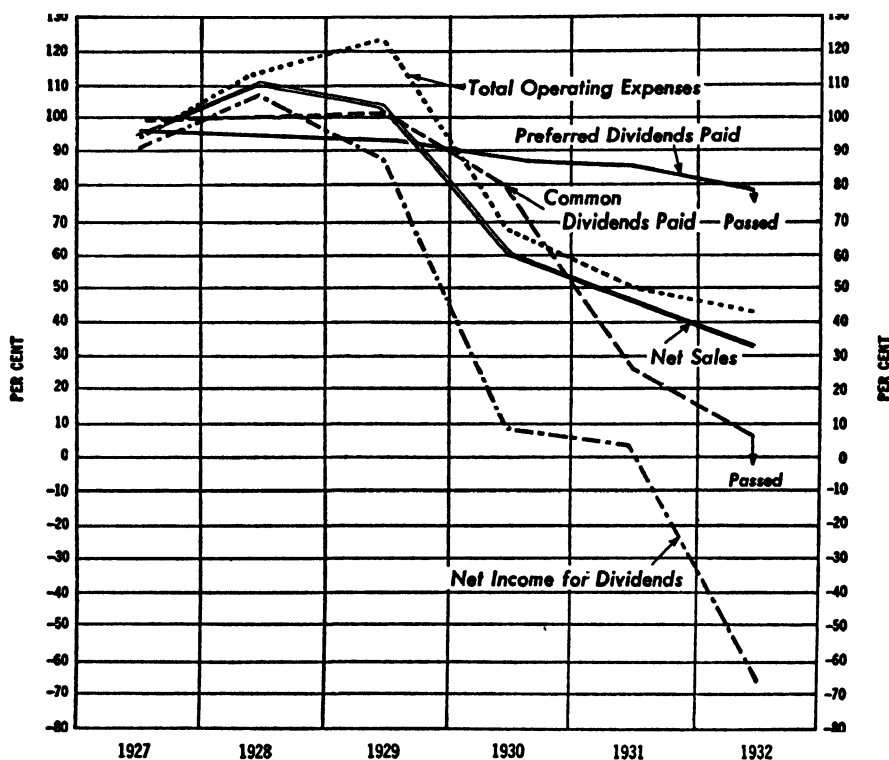


Chart 3. Comparison of income accounts

of their final culmination. The method when used in connection with quarterly or semi-annual statements of earnings and balance-sheet position is even more accurate and effective. Comparative analysis of the income accounts, per car data, and the balance sheet is illustrated in Charts 3, 4, and 5.

A comparative analysis of the income accounts of Studebaker on a horizontal percentage trend or index basis (Chart 3) reveals that the company's total dollar sales volume showed an irregular trend as early as 1927 and 1928, two of the most prosperous years in the industry. By 1930 the decline became very pronounced, reaching in 1932 a low of 32.6 per cent of the 1926 volume. At the

same time the percentage index of total operating expenses exceeded the index of sales from 1928 on. The remainder for dividends declined rapidly from 1928, reaching in 1932 a deficit percentage of *minus* 64 per cent of the base. In the face of this unfavorable condition, the management continued to pay out preferred and common dividends against rapidly mounting operating deficits. By 1932, earned surplus after dividends had reached a figure of minus 300 per cent of the 1926 base.

Comparative operating data on a per car basis (Chart 4) indicated an even more unsatisfactory trend. In the face of rapidly expanding productive capacity in dollars of fixed assets per car produced, sales of cars steadily declined, drop-

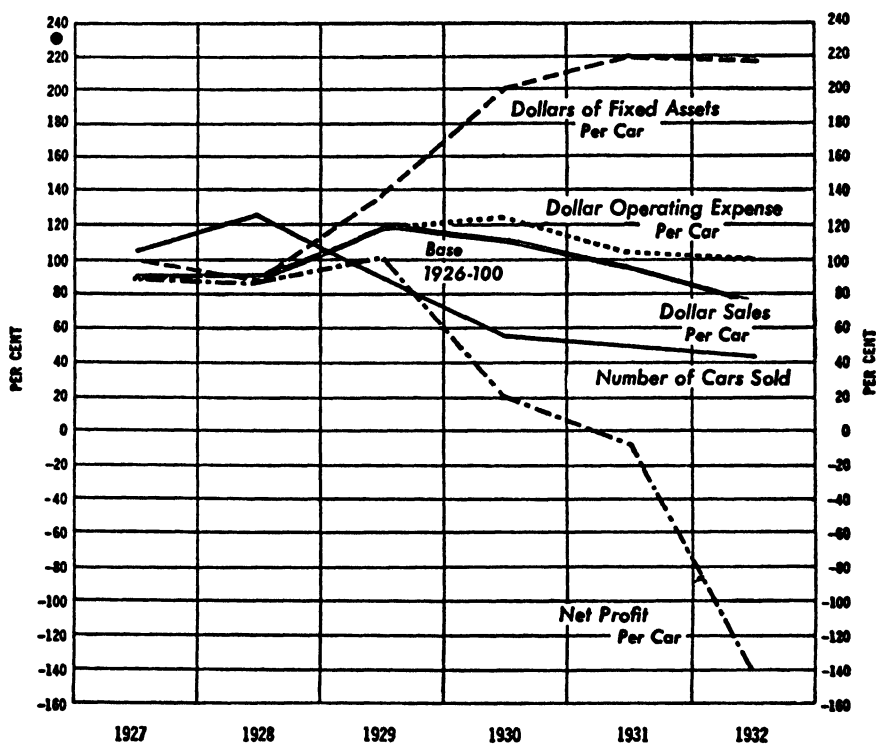


Chart 4. Operating data—per-car basis

ping from 142,869 in 1928 to 49,869 in 1932. While dollar sales per car dropped steadily, dollar cost per car increased and net profits per car declined in 1931 to 8.7 per cent of the 1926 figure and minus 140 per cent in 1932. At the same time dividends were maintained, and, in an effort to regain its trade position, heavy expansion investments were made in conjunction with the purchase of Pierce-Arrow in 1928, the organization of the Rockne Motors Corporation, in 1931, and White Motors in 1932, the last project representing the final straw that broke the camel's back.

Throughout the entire period from 1927, Studebaker consistently earned on its invested capital less than the prevailing rate for the automobile industry.

Thus, in 1927 it earned 9.9 per cent as against 22.1 per cent; in 1928 11.4 per cent, as compared with 23.4 per cent; in 1929, 10.1 per cent as against 19.5 per cent; in 1930, 1.4 per cent as against 8.8 per cent; in 1931, 0.9 per cent contrasted with 4.2 per cent; and finally, in 1932, a deficit of 8.1 per cent as against a deficit of 4.1 per cent for the industry as a whole.

Another interesting measure is composite market value. In other words, the trend of the total market value of all outstanding securities frequently is a very good indication of financial difficulties. Of course, it

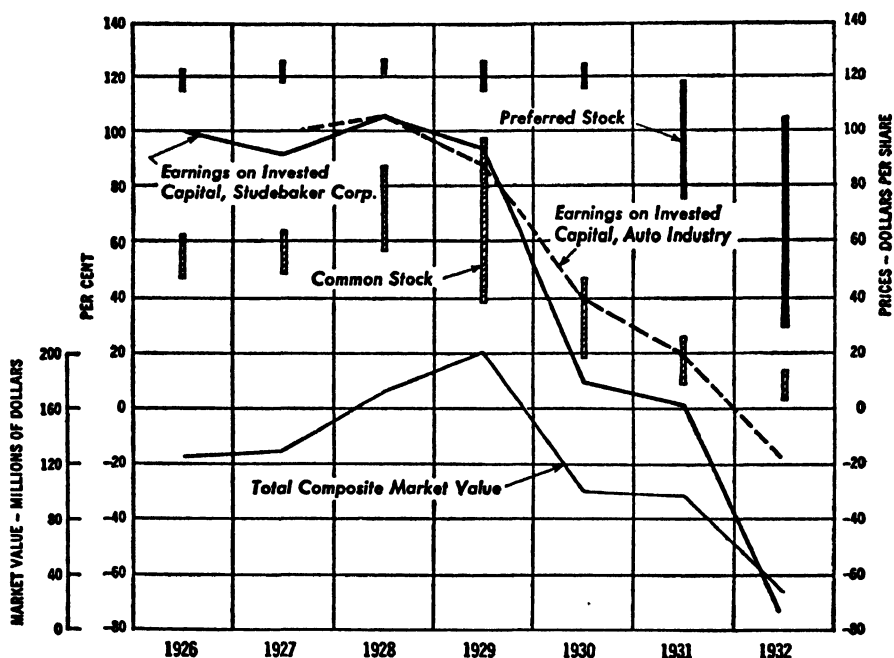


Chart 5. Earnings and market value

is necessary to eliminate market elements, or any special factors that will accentuate the decline or upset the normal valuation from a standpoint of earnings.

In Chart 5 the total high composite market value of Studebaker is compared with the price range of the company's preferred and common stock together with the declining return on invested capital. In 1929, the highest open-market value of the company reached \$200,995,000, dropping in 1930 to \$98,640,000, and, finally, to \$28,357,000 in 1932. Whereas in 1929 the outstanding common shares had a high market value of \$192,213,000, it had shrunk to a high market value in 1932 of \$6,158,000.

Ordinarily, continued and insistent declines such as that do not occur

without there being some reason for it over and above any special market factors. It is generally found that there is a relationship between a continuous downward decline in market values and something that is inherently wrong with the company, because, sooner or later, the relationship of earning power and the market price will come into balance.

Without going into greater detail about the particular relationships of the income account and the balance sheet, it is possible to summarize these results and arrive at a comprehensive statement of why Studebaker did fail.

TABLE 19
Horizontal Percentage Trend Analysis of Selected Balance-Sheet Items
STUDEBAKER CORPORATION

		1926-1932					
Years ended	(000	1927%	1928%	1929%	1930%	1931%	1932%
December 31	omitted).	of	of	of	of	of	of
	1926	1926	1926	1926	1926	1926	1926
Cash & equiv.....	\$15,856	87.0	98.5	32.0	50.5	63.0	63.0
Receivables	9,600	73.5	56.0	47.0	38.0	41.5	57.5
Inventories	21,581	137.0	112.0	120.0	81.0	75.0	80.0
Total cur. assets....	47,037	107.0	95.5	76.0	62.0	64.0	70.5
Total cur. liab.....	10,286	140.0	129.0	98.0	103.0	133.0	112.0
Working cap.†	36,751	98.0	87.0	70.0	50.5	45.0	59.0
Fixed assets	63,186	103.0	109.0	136.0	112.0	107.0	113.0
Intangibles	20,318	101.0	101.0	100.5	99.5	102.0	30.0
Funded debt	*\$8,233.	95.0	75.0	250.0
Pfd. stock	7,500	98.5	97.5	93.0	90.0	90.0	77.5
Com. stock	75,000	100.0	100.0	105.0	102.0	102.0	65.5
Cap. surp. & res.....	7,296	94.5	121.0	99.0	105.0	110.0	270.0
Earned surplus	30,458	105.0	98.0	76.0	35.5	26.0	6.5

* No funded debt until 1929. Subsequent percentages for 1930, 1931, and 1932 are index percentages of 1929 as a base.

† Net current assets.

The important items in the comparative balance sheet (Table 19), when submitted to a horizontal percentage method of analysis, clearly indicate certain failure tendencies. The weakened cash position which, in 1929, represented 32 per cent of the 1926 basis, was caused by the company's expansion program. Receivables declined, reflecting principally decreased volume of business. Inventories increased substantially from 1926 to 1929, not only in the face of an unsatisfactory trend in sales through 1928 but a sharp decline in 1929 as well. Both current liabilities and funded debt continued to increase throughout the seven-year period, as did fixed assets together with advances to and investments in subsidiaries. Earned surplus rapidly disappeared through excessive cash dividends and other withdrawals, in addition to special charges in connection with investment for the expansion.

Summarizing the basic causes of the failure of the Studebaker Corporation, one may conclude that there were prevalent a substantial number of the characteristics of both income account failures and balance sheet failures. The company was losing its trade position; it embarked upon a program of expansion of fixed assets in order to regain it. Earnings were not sufficient to permit expan-

sion, meet an additional costly overhead, and still allow a continued liberal dividend policy. With a much weakened working capital position, the company was not in a position to maintain its product in line with consumer demand.

The corrective measures in this instance required more than a mere adjustment of debt and reduction of interest and preferred dividend charges. The reorganization as carried out recognized and corrected the heavy burdens which the previous management imposed on the operating status of the company, and financial reorganization was supplemented by a comprehensive internal reorganization with the result that Studebaker has been solvent ever since.

RECAPITALIZATIONS AND READJUSTMENTS

There are several broad types of recapitalizations and readjustments used in corporate finance. In the first place, there are those recapitalizations which are voluntary and which are carried out without recourse to equity or statutory procedure. A second type includes those internal readjustments and devaluations (write-offs and write-downs) which are not accompanied by recapitalization. A third type includes involuntary reorganizations with equity receivership or bankruptcy. The immediate discussion will concern itself with the first two types, the third being discussed in the next chapter, under the general subject of railroad and industrial reorganization.

Generally speaking, decapitalization and devaluation are usually resorted to in periods of business decline, depression, or early revival. Recapitalizations and revaluations involving split-ups, write-ups, and stock dividends are used during periods of accelerated revival and prosperity.

VOLUNTARY RECAPITALIZATIONS

Included among the so-called prosperity types of voluntary recapitalization are those which take the form of stock dividends, stock split-ups, and reductions in par value of capital stock with an increase in the number of shares outstanding either by issuance of low par value shares or shares with no par value. All of these are typically associated with periods of expansion and prosperity.

As an illustration of stock dividends and split-ups it will be assumed that there is a corporation with 1,000 shares of capital stock of \$100 par value, a total of \$100,000. This company has earnings of \$20 per share and pays a dividend of \$10 per share. It has an earned surplus of \$400,000. Assuming that at the current market the stock is yielding 4 per cent, the market price of this stock would be, roughly, \$250 per share. The effect of a 300 per cent stock dividend in shares of the same par value would be to increase the number of shares to 4,000 shares at \$100 par, or \$400,000; and to decrease the surplus to \$100,000. It would have

the further effect of decreasing the earnings per share to \$5 and the dividend, if maintained at the same relative level, to \$2.50 per share. The price, on a 4 per cent yield basis, will be brought down to \$62.50 per share. This might be done to accomplish one or more of several purposes as shall be set forth subsequently.

Solely for the purpose of illustration it is assumed that the above corporation wishes further to increase the number of shares outstanding by means of a split-up. The effect of issuing 5 shares of no-par stock in exchange for each share of stock outstanding will be to increase the number of shares from 4,000 to 20,000. The stated value of the capital stock will remain at \$400,000 and surplus will remain at \$100,000. The important effect will be that earnings will have been brought down to \$1 per share and, assuming dividends of \$0.50 per share, the price will have been brought down to about \$12.50 per share.

In addition to the foregoing types of voluntary recapitalization, there are several others which are feasible and which may be frequently resorted to in periods of prosperity. Included among these is the redemption of preferred stock issues through call, purchase in the open market, or in exchange for common stock. Also included are refundings of bond issues, the extension of maturing funded debt, and the recapitalizations which arise out of expansions, mergers, and consolidations.

OBJECTIVES OF PROSPERITY TYPE RECAPITALIZATIONS

The employment of stock dividends in corporate finance may serve one or more of several purposes. It should be noted that in all cases stock dividends involve a capitalization of surplus and an increase in capital stock. Thus, it may be the purpose of the corporation in this manner to broaden the market for future financing by creating a large number of shares and thus a larger volume of trading as well as, ultimately, an increased number of shareholders. Stock dividends may also be used to effect liquidations as well as distributions of closely held companies. In addition, they serve to facilitate the exchange of securities in mergers or consolidations by bringing the per-share value of the securities of the merging companies into a workable relationship. An important purpose of stock dividends, if used as part of a regular dividend policy, is to conserve cash and working capital and thus to facilitate expansion. It will be recalled that International Business Machines has successfully followed such a dividend policy.

Finally, this device may be used to correct a condition of undercapitalization and thereby:

1. Reduce dividends per share.
2. Check speculation and wide fluctuations in market price.

3. Increase the floating supply of stock and facilitate open market operations.
4. Capitalize surplus earnings.
5. Reduce taxes.
6. Prevent excessive cash dividend distributions and at the same time satisfy the stockholders' desire for dividends.

Obviously, split-ups may be used to accomplish many of the above objectives. The important distinction is that the split-up does not involve a capitalization of surplus, although there are instances where recapitalizations have combined stock dividends and split-ups and thus have involved such a capitalization.

DEPRESSION TYPES

The depression type of voluntary recapitalization may involve two things: (1) a recapitalization or readjustment of the financial structure as shown on the liability side of the balance sheet, and (2) the write-downs and write-offs which involve the asset side of the balance sheet. Not every recapitalization will involve a write-down or a write-off, but where such readjustments occur they may be handled in various ways. Sometimes the write-down is effected entirely against the accumulated earned surplus and depreciation reserve. In other cases a capital surplus must be created to absorb write-offs as well as write-downs of inventories, fixed assets, receivables, and so forth.

Recapitalizations of the depression type may take many different forms, including the following:

1. Reduction in par value of capital stock creating capital surplus.
2. Reduction in the stated value of no-par shares creating a capital surplus.
3. Reduction in the number of shares outstanding—a reverse split-up.
4. Reclassification of reserves to increase surplus.
5. Reclassification and redesignation of shares eliminating dividend arrears on preferred stock.
6. Funding of preferred stock dividend arrears.
7. Funding of floating debt.
8. Refunding of funded debt.
9. Extension of indebtedness with an increased rate of interest as an inducement.

PURPOSE

Speaking generally, the purpose of any of the foregoing operations is to improve the over-all financial condition of the company involved. More specifically, reductions in par or stated value have as their immediate purpose the creation of capital surplus against which assets may be

written down or devaluated, inventory and receivable losses may be written off, or previous operating losses and deficits may be absorbed. Reductions in par or stated value may also be used to facilitate the exchange basis for mergers and consolidations, to facilitate raising additional capital, to permit the continuation of preferred dividends out of created surplus, or to save taxes.

A reduction in the number of outstanding shares may have the purpose of reducing the floating supply of stock and thus facilitating open-market operations. Obviously, a reverse split-up decreases the number of shares and thus increases the market price per share. It might be desirable to raise the market value either to improve the collateral value of the stock or to provide a simple exchange basis for mergers. A reduction in the number of shares outstanding may also serve to create capital surplus for readjustment purposes and also in order to serve to reduce transfer costs and taxes.

Reclassification and redesignation of shares may be done for the purpose of facilitating the maintenance of voting control, providing an exchange basis for merger, adjusting the position of creditors who accept stock for their claims, and raising additional capital.

INTERNAL READJUSTMENTS AND DEVALUATIONS

The internal readjustments which may or may not accompany changes in capital structures may likewise be grouped into prosperity types and depression types. The prosperity types may involve an upward re-appraisal of fixed assets, intangible assets, inventories, or securities; or they may arise out of the purchase of assets at substantial premiums over book cost in the course of mergers and consolidations.

Such revaluations were frequently employed during the period of expansion that occurred in the late 1920's. It is possible that in any future period of a similar nature there might be a resumption of this practice. Doubtless there are many write-ups which have a justifiable and sound basis; however, it is important to realize the dangers and abuses which might result.

Revaluations of the prosperity type may easily result in overcapitalization, with unreasonably heavy debt structures and consequently burdensome fixed charges which cannot be supported during periods of recession. Past experience has proved that this not only makes financing in times of stress extremely difficult, but that it may frequently lead to the necessity for future decapitalization accompanied by write-downs and write-offs. Further, if overcapitalization takes the form of debt based on unsound values and inadequate earning power, failure and reorganization may ensue.

DEPRESSION TYPES

It is characteristic of periods of early recovery, such as occurred in the period from 1934 through 1937, that there is considerable activity directed to the revamping of capital structure and the elimination of overvalued assets and deficits.

Such devaluations and adjustments of assets may take several forms. Assets may be written down against existing surplus, or, they may be written down against credited surplus. As an example of the latter, the Universal Pipe and Radiator Company reduced the stated value of its stock from approximately \$14,400,000 to \$488,000. It then wrote down good will and fixed assets to the extent of almost \$12,000,000 against the capital surplus that had been created. Adjustments of this type may also be accomplished by means of the sale and liquidation of unused assets or by the assignment of assets to a creditors' committee for rehabilitation.

PURPOSE AND PROCEDURE

Broadly, the general purpose of these downward readjustments is to reduce overvaluation and, indirectly, overcapitalization. Such devaluations may be necessary to adjust asset values (particularly fixed assets) to existing price levels or to wipe out assets of doubtful value. They may also serve to reduce depreciation charges (by reducing the valuation of fixed assets) and thereby increase reported earnings; and, in some instances, they have been used to eliminate intangible asset values by write-offs to earned surplus, thus removing possible pressure for dividends. In certain cases they have been used to remove evidence of management mistakes.

The proper procedure in writing down asset values or writing off losses is: first, by charges to earned surplus or contingency reserves previously set up, and second, by charges to surplus created out of capital-stock readjustments. Write-offs to earned surplus or contingency reserves do not require the sanction of the stockholders. The approval of the stockholders is necessary, however, to create capital surplus out of capital stock.

Undoubtedly the above procedure is the one that is most logical and the one which is to be preferred in all cases. However, other much less satisfactory procedures are used. For example, it is sometimes found that write-ups often accompany or precede write-offs and write-downs and are used to offset them, thus avoiding the necessity of charges to surplus. Write-offs and write-downs may also take the form of charges to operating income, and to the extent that they are excessive, result in understatement of current net earnings. Finally, organization expense and good will are sometimes overstated in order to conceal a write-off in fixed or other assets.

It can readily be seen that an improper use of write-offs and write-downs might have undesirable results and that the procedure might be subject to abuse. For example, if values are understated, an understatement of depreciation might result and stated earnings might thereby be artificially increased. Obviously, earnings stated on such a basis give an erroneous impression, causing the management to appear to be successful while actually the opposite may be true. Also, dividends disbursed on the basis of such artificial earnings might actually constitute a distribution of capital. Other dangers are that devaluation might destroy historical costs as a basis of valuation in the accounting system and that underdevaluation may result in inadequate insurance protection. There is also the possibility that write-downs might be used to facilitate market manipulation in a company's securities.

The advantages of write-downs and write-offs if properly applied are: (1) that *current* values are thereby reflected; (2) that present management may thereby be relieved from unnecessary burdens of the past; (3) that an earlier resumption of dividends may be permitted; (4) that balance sheet values are more truly stated and thus are more reliable for credit and investment purposes; and (5) that net worth is reduced to a current equity value.

PAST EXPERIENCE

Because there have not been many devaluations in recent years, it is necessary to go back to the 1930's for the purpose of finding examples. It is interesting to note, however, that not long ago, by a reduction of \$162,-500,000 in the stated value of its stock, the Consolidated Edison Company of New York has created an unearned surplus of that amount which, in addition to existing earned surplus of \$87,000,000, provides a means whereby readjustments in the company's accounts up to \$238,-500,000 are made possible. This was done primarily to expedite a large-scale refinancing program in the face of certain contentions by the New York Public Service Commission, not concurred in by the company, that deficiencies in depreciation reserves and other "shortages" existed.

As has been previously stated, a number of write-downs occurred in the middle 1930's, two of the most spectacular being United States Industrial Alcohol and Commercial Solvents, which were the first important companies to adopt the practice of writing all their plants down to a value of \$1. This practice created some interesting accounting and financial problems, as revealed by my article in *Barron's Weekly* in October 1934. In the former case the write-down was almost entirely against surplus contributed by the stockholders. In the latter, it was properly charged against earned surplus.

EFFECT ON EARNINGS

An outstanding example of the manner in which asset devaluation may affect earnings is found in the case of the United Fruit Company. Subsequent to a change in management, which resulted in a thorough internal reorganization, a policy of devaluing assets was instituted. This company, by writing down its assets in 1932 in the amount of \$51,000,000, through charges to earned surplus and some special reserves, effected a reduction in depreciation charges of approximately \$4,700,000 per annum. This was equivalent to \$1.62 per share. The company's earnings, as reported, amounted to \$2.32 per share in 1931, \$1.97 in 1932, and \$2.98 in 1933, after deducting losses on assets sold in 1932 and 1933. However, if it had not been for the effect of reduction in depreciation of \$1.62 per share, as a result of write-down of assets, the adjusted earnings would be as follows: in 1931, \$2.32; in 1932, \$0.35; in 1933, \$1.36.

BASIC REQUIREMENTS

In conclusion, it may be stated that, for recapitalizations and revaluations of the depression type to be successful, several requirements may be considered basic. These are:

1. A strong cash and current position which precludes the danger of receivership or bankruptcy.
2. A sound economic justification for the continued existence of the industry and the particular business unit.
3. A reasonable prospect of early recovery in earnings and resumption of dividends.
4. A capable and experienced management which will prevent the recurrence of any previous errors.
5. A dissemination of adequate information to stockholders and creditors regarding the proposed recapitalization and readjustment.
6. Adequate safeguards for the protection of prior claims and rights.

REVIEW QUESTIONS

1. In the evolution of federal bankruptcy law in our country, was the debtor or creditor the principal object of protection? Give reasons for your answer.
2. What new concept grew up in bankruptcy as a result of the great depression experience of the early 1930's?
3. What legislation was passed at that time designed to afford relief to individual debtors, railroad debtors, general corporate debtors?
4. Briefly give some idea of the magnitude of annual business failures in the United States.
5. During the past quarter century approximately what is the average number of cents per dollar of debt paid to creditors from bankruptcy proceedings?
6. How important is the business cycle as a cause of business failure? Name at least three other basic causes of failure.

7. Define the term "economic failure."
8. What is the difference between:
 - (a) Reorganizable insolvency?
 - (b) Financial insolvency?
 - (c) Confirmed insolvency?
9. In the detection of failure tendencies, state the extent of responsibility falling on:
 - (a) The management of the concern.
 - (b) Creditors and investors.
 - (c) The investment bankers.
10. There are two general methods for detecting failure tendencies, known as the external and the internal.
 - (a) What does the external method involve?
 - (b) State the important balance sheet and income account changes which make up an internal trend analysis.
11. Corporation "A" is capitalized with 1,000 shares of \$100 par value common stock. It closes the current year with a surplus of \$400,000 after earning \$20 a share. The current dividend rate is \$10 per share and the stock is selling on the market at a price to yield 4 per cent.
 - (a) Show in tabular form the items of:
 - (1) Number of common shares outstanding.
 - (2) Par value.
 - (3) Total capitalization.
 - (4) Surplus.
 - (5) Total capitalization and surplus.
 - (6) Book value per share.
 - (7) Earnings per share.
 - (8) Market price.
 - (b) Assume a 300 per cent stock dividend in shares of the same par value and give effect to the changes thus caused in (a).
 - (c) Assume (for illustration) further that the corporation now wishes to increase the number of shares and declares a five for one split-up. Give effect to changes in (a).
12.
 - (a) What is the effect of a stock dividend on the surplus account?
 - (b) What is the effect of a stock split-up on the surplus account?
13. What purposes are served by a policy of regular stock dividends in lieu of cash dividends?
14. Name two ways in which the surplus account can be increased other than by increasing earnings of the company.
15. What is the practical reason for a split-up on a high-priced listed common stock?

INDUSTRIAL AND RAILROAD REORGANIZATION

*by Dr. Louis P. Starkweather, Lecturer in
Finance, Graduate School of Business Admin-
istration, New York University; Professor of
Finance, Rutgers University*

THE Federal Constitution under Article I, Section 8, provides Congress with power to establish uniform bankruptcy laws throughout the United States.

We have had four federal bankruptcy acts in the life of our nation with periods in between when the problem of handling insolvencies has been left to the various states. The fourth Bankruptcy Act, passed in 1898, has been amended at various times since then. During 1933 and 1934, several amendments to the law were enacted. These amendments were designed to alleviate and readjust the financial condition of several classes of petitioning debtors. While it is true that the main purpose of the bankruptcy act is to provide the machinery for liquidating the assets of insolvent debtors, the 1933 and 1934 amendments sought to prevent forced and disastrous liquidation. This was to be accomplished by extensions, compositions, and reorganizations.

These amendments were hurriedly passed to meet the exigencies of the severe postwar depression period and resulted in many ambiguities and uncertainties. To correct some of these faults, the Chandler Act was passed in 1938.

Before 1934 most corporations, when confronted with serious financial difficulties, resorted to reorganizations by means of a nonstatutory procedure, commonly referred to as reorganization through equity receivership.

Since there was no fixed legal code by which these equity receiverships were consummated, they rested very largely upon precedent and upon previous cases.

Of course, there were many unsatisfactory features in connection with equity receiverships. Even after negotiations among the various protective committees and reorganization committees had been completed and a plan had been agreed upon, argued in the equity court, and carried

through, it still required, as a formal closing, a foreclosure proceeding, the establishment of an upset price, and a sale of the properties of the old company to the new company, organized for that purpose, at the upset price.

Frequently it was true that the only parties that bid for the properties were the particularly interested groups, or single group, that had been pushing the reorganization plan. In some cases these parties may have represented the old bondholders, if they happened to be more powerful than the common stockholders. In other cases, sponsorship was by the common stockholders, the management, and allied banking groups. It was not infrequent, then, that in an equity receivership the common stockholders and the management received better treatment than did the first mortgage bondholders. The doctrine of absolute priority was not necessarily adhered to, and the process of trading and negotiation between the various protective committees and parties at interest frequently brought about inequities in the treatment of holders of different classes of securities.

Another feature of the equity receivership that was cumbersome was that a plan could not be declared operative and become binding upon all of the parties at interest unless they all collectively accepted the plan. The result was that minority interests were in a position to prevent the plan from becoming operative, and frequently it was necessary for insistent minorities to be bought out. As a consequence, many of the equity receiverships, particularly in the railroad field and in the utility field, dragged on and on and were very slow in being consummated. Even some of the industrial reorganizations under the old equity receivership procedure also were delayed in achieving a prompt consummation because of objecting minorities. Thus, in view of the difficulties attendant upon equity receivership it was, in effect, necessary to resort substantially to the procedures provided in the Bankruptcy Act.

The original Bankruptcy Act had several purposes. First, the intention was to safeguard creditors and to prevent preferences and priorities in judgments and attachments. In other words, the procedure was to put in a referee, a trustee, or a receiver on the theory that as soon as the affairs of the company were brought under the protection of the court and the trustee functioned, such inequities might be forestalled. The philosophy was that the debtor was incapable of managing his affairs and that the creditors needed to be protected.

A second purpose of the original Act was to prevent forced liquidations because, after all, the real value of any enterprise is in that enterprise as a going concern, and not on a forced liquidation basis.

A third purpose, which recognized the possibility that the causes of

failure sometimes are beyond control, was to relieve honest debtors, giving them a chance to start anew.

Finally, the Act was intended to benefit society as a whole, the theory being that society needed protection from the debtor who in most cases was responsible for the difficulties—society as a whole being looked upon as a creditor and not as a debtor.

When, in 1933, the amendments, which were designed as debtor relief amendments, were passed, it is readily seen that a tremendous shift in attitude occurred.

Under Chapter X and prior to that under Section 77-B, the law was basically changed to read that a corporation or an individual could apply for relief if insolvent or if he was unable to meet his debts as they matured. This immediately meant that the individual could apply for relief, he could stay in possession of his own property, and he would not have to admit insolvency.

The result was that in the early days when Section 77-B was first on the books, almost every small corporation and many individual businessmen, both large and small, finding themselves in temporary difficulties, took advantage of the relief thus offered. The courts became so cluttered up with Section 77-B cases, and there was so much abuse of the procedures permitted under the act, that after considerable litigation over a period of years Section 77-B was finally thrown out and replaced with Chapters X and XI. Chapter XI was designed primarily for the small enterprise and covered only a compromising of unsecured debts where there was no public interest involved. Chapter X was to apply to the larger cases where there was considerable public interest, and where it was necessary to go beyond a simple compromise or a composition.

FUNDAMENTAL REQUIREMENTS OF SOUND REORGANIZATION

The first qualification of a sound reorganization is effective reorganization of management and personnel. Anyone analyzing a reorganization plan or recommending that the security holders accept that plan should look carefully into whether there is any indication of a real change in management so that any old elements that might have been responsible for failure will be eliminated. Where there is real evidence of a change in management, it is an important, and may well be the most important, factor in the future success of a reorganized company.

Then, second, there should be evidence that a thorough reconstruction of plant and production facilities is intended. Frequently it will be found that financing has been arranged or has been provided for that purpose. It is a simple matter to find reorganizations where part of the reorganization plan involved financing for that purpose. In the Colorado Fuel and

Iron reorganization, for example, there was a provision for a second mortgage or a junior mortgage bond issue which the parties to the plan approved in principle without the details but which, in effect, gave the directors a blank check to raise about \$15,000,000 more, which they anticipated would probably be used for the rehabilitation of the properties as well as the refunding and the paying off of the old Fuel 5's. In any event, there should be evidence of a thorough survey of plants and facilities and a plan for bringing them into efficient operating condition.

Third, there should be a sound rehabilitation of sales, products, and markets. Sometimes a reorganization, the real heart of a reorganization, provides for a complete overhauling of the entire marketing, sales, and product structure. In other words, that is the cause of the trouble. It is not a question of the financial plan that is inadequate. It is merely that the company has no decent products, that they are not being properly received, and that they need some new products. To the extent that that problem is solved, the plan will be a success.

Fourth, there must be adequate provision for cash and working capital requirements. Sometimes during the period of receivership a liquidation program is followed. In this way a substantial amount of cash is raised and working capital is increased through the sale, for example, of affiliates and subsidiaries. In such a case it is not necessary to raise additional cash by means of a financing operation following the acceptance of the reorganization plan or part of it. An example of such a procedure was the old Virginia-Carolina Chemical Company which was an equity receivership action. While the receiver was in charge of that company, he sold several of its subsidiaries and provided not only enough cash for ample working capital requirements but enough to settle with the unsecured creditors and, to some extent, with the secured creditors.

As another example, McKesson and Robbins' reorganization plan provided for settlement of claims approximately 40 per cent in bonds, 40 per cent in preferred stock, and 20 per cent in cash. Most of the cash that was used as part of that reorganization plan was raised from the sale by McKesson and Robbins of the Hunter Baltimore Distillery. Thus, frequently the cash and working capital requirements are provided for during the period of receivership or trusteeship through the liquidation of properties and through the internal rehabilitation of the company, so that it is not necessary to depend on subsequent financing to provide that cash; however, there must be adequate provision for such cash and working capital.

Fifth, overcapitalization must be eliminated. Unless the proposed plan clearly and decisively eliminates the overcapitalization, the reorganization will not be successful. This may be done:

1. By a reduction of loans and funded debt in principal amount.
2. By a reduction in interest and fixed charges to a point consistent with earning power.
3. By liquidation of obsolete inventory and frozen receivables.
4. By liquidation and/or revaluation of fixed assets based upon sound appraisals of their basic earning power.

Unless there is evidence of those four elements operating to bring into balance the new capital structure on a conservatively capitalized basis, no progress in the reorganization will have been made.

The Colorado Fuel and Iron case, which will be discussed subsequently, is an ideal illustration of the failure to reduce over-all capitalization because, while they reduced the debt, what they did was merely to replace that reduction in interest charges and debt with common stock and warrants which, if exercised, would result in an overcapitalized condition.

Sixth, there should be adequate reductions in overhead expenses, salaries, withdrawals, and taxes.

Seventh, there should be evidence of an introduction of sound financial and managerial sponsorship, frequently with a new directorate. Sometimes this will be found in reorganizations, other times it will not. Sometimes it is possible to retain the most effective elements of the old directorate.

Eighth, there should be a fair treatment of creditors to insure a continuation of adequate credit to the newly reorganized company.

Ninth, there should be complete elimination of liens, judgments, assignments, and other legal entanglements. That usually is necessary and is always effective, because there would not be a discharge by the court and the new corporation would not become operative unless there had been such a complete elimination.

Finally, there should be an effective recovery of good will and trade standing. This will usually be achieved if the preceding nine factors are present.

REORGANIZING INDUSTRIALS UNDER CHAPTER X

The purpose of Chapter X of the Bankruptcy Act is to establish an effective vehicle for reorganizing so-called *large corporations*. Under it the federal courts are given wide jurisdiction over reorganizations, including the authority to appoint trustees, to supervise the operations of the business, to receive reports on the condition of the business and the management, to receive and approve plans of reorganization, and to confirm the accepted plan and supervise its execution.

Briefly, the effect of this legislation has been to eliminate managements

and underwriters as dominant factors in reorganizations. It also permits the Securities and Exchange Commission to act in an advisory capacity in connection therewith. In addition, it provides for the preparation and submission of reorganization plans to the interested parties by independent and disinterested trustees and, to some extent, it controls the activities of protective committees. An important distinction is that the insolvent corporation is designated as a *debtor* rather than as a *bankrupt*.

PROCEDURE

Reorganization proceedings may be initiated under Chapter X by filing a petition in a federal district court. This may be done by the corporation, a specified number of creditors, or by an indenture trustee of outstanding securities which constitute claims against the property. If the corporation files such a petition, it must assert that the corporation is insolvent or unable to pay its debts as they mature; and, in addition, it must set forth rather fully the facts pertaining to the affairs and condition of the company. If the proceedings are initiated by the other parties privileged to do so, certain additional allegations must be made.

In the latter case, the debtor corporation may file an answer to controvert the facts alleged in the involuntary petition. Similarly, a creditor or indenture trustee may answer the allegations made by or against the debtor corporation. Finally, a stockholder may file an answer if the corporation is not insolvent. The authority to approve or dismiss the petition lies with the court.

CONTROL OF PROPERTY

During the period of the proceedings, provisions are made for the possession and management of the property by one or more disinterested trustees appointed by the court, in addition to whom the court may appoint a director, officer, or employee of the debtor corporation as trustee or co-trustee. In cases where the indebtedness is within certain limits, the debtor may be continued in possession, in which case a receiver may or may not be appointed.

In general, whoever is in possession must operate the business, make specified investigations into the affairs of the company, and submit certain reports and recommendations to the court, to the creditors, stockholders, indenture trustees, the SEC, and other interested parties. Many of these duties must be carried out under the direction of the court.

THE REORGANIZATION PLAN

When the debtor is continued in possession, a plan for the reorganization of the debtor corporation may be prepared and filed by the debtor, any creditor, an indenture trustee, any stockholder (if the debtor is

solvent), or an examiner or receiver if the last is directed to do so by the court. However, where a trustee is in possession, the plan must be filed by the trustee.

Generally speaking, a proposed plan must set forth all the details of the contemplated reorganization. It may provide for changes in the rights and claims of the interested parties by modifying or altering the rights of creditors or stockholders generally or any classes of them. It must list any claims which are to receive full cash payment and any creditors or stockholders not affected by the plan. In addition, it must provide for fair and equitable treatment of any class of affected creditors which does not accept the plan by the required majority as well as adequate protection for the stockholders where the corporation is solvent. It may also include other provisions, considered necessary to the success of the reorganization, relating to executory contracts and debt retirement.

The plan may provide for modifications in the corporate charter within certain limitations which include a prohibition on the issuance of non-voting stock and make mandatory an equitable distribution of voting power among the various classes.

Finally, the proposed plan must provide an adequate means for its execution which may include any of the following:

1. Retention of the property by the debtor.
2. Transfer of any or all of the debtor property to one or more corporations organized previously or thereafter.
3. Merger or consolidation of the debtor with other corporations.
4. Sale of property at not less than the upset price and the disposal of the proceeds or of the assets themselves among those having any interest therein.
5. Modification of liens.
6. Curing or waiver of defaults.
7. Extension of maturity dates.
8. Change in interest rates or other terms of outstanding securities.
9. Amendment of the debtor's charter.
10. Issuance of new securities to satisfy existing claims or to raise additional cash.

APPROVAL AND ACCEPTANCE

Under Chapter X proceedings the court must approve the reorganization plan before it is submitted to the interested parties. In addition, the Securities and Exchange Commission must review the plan before approval by the court if the scheduled debt exceeds \$3,000,000, and may, at its option, review the plan if the scheduled debt is less than that amount.

While such a plan is under review by the SEC, the court may not order its approval until the Commission has filed or declined to file its report in the time designated.

In public utility reorganizations, the state public utility commissions concerned must be permitted to suggest amendments and objections to the plan before such plan is confirmed. If the public utility is wholly intrastate, no plan can be approved until the state commission, if any, has first certified its approval, which it must give only if it is deemed as fair and as serving the public interest.

After the court approves the plan, the pertinent information is transmitted to all interested creditors and stockholders, and, in order to be binding, must be accepted by:

1. Two thirds in amount of each class of creditors whose claims have been allowed.
2. A majority of each class of stockholders affected, provided the company has an excess of assets over liabilities.

Claimants whose approval is not required include creditors and stockholders unaffected by the plan; claims appraised and paid off in cash; stockholders, if the corporation is insolvent; and certain others.

After the court has heard all objections to the plan, is satisfied that it is fair and equitable, that it meets all statutory requirements and that all details are satisfactory, the court confirms the plan. However, changes may be proposed either before or after confirmation which may be approved by the court if they are deemed in the interest of the creditors and stockholders.

Subsequent to confirmation the plan is executed in accordance with its provisions and a final decree is entered by the court after the plan is consummated. This decree discharges the trustees, releases the corporation from all debts, and terminates all rights of creditors and stockholders except as provided in the plan.

REORGANIZATIONS UNDER CHAPTER XI

The purpose of Chapter XI of the Bankruptcy Act is to provide an effective method for reorganizing so-called *small corporations* by effecting a satisfaction of or an extension of the time of payment of unsecured debts. Undoubtedly, the intention was to facilitate and expedite reorganization proceedings, and to this end it is provided that debtors who are eligible under Chapter X must use Chapter XI, where a successful reorganization may be attained by means of a simple agreement with the creditors.

Under Chapter XI proceedings the plan of the debtor designed to satisfy unsecured creditors is referred to as an *arrangement*. To initiate proceedings for an arrangement a petition must be filed by the debtor setting forth that the debtor is insolvent or unable to pay his debts as they mature and stating the provisions of the proposed arrangement. In addition, it must contain a statement of the debtor's affairs, a schedule of claims, and other details.

Considerable flexibility in the provisions of the proposed arrangement is allowed. However, it must include any provisions for modifying or altering the rights of unsecured creditors. It may include provisions for the treatment of unsecured debts on a parity with one another, or, on the other hand, it may provide for the division of debts into classes and for treatment of the various classes upon different terms.

Among other provisions it also includes provisions for payments on account to be made during a specified period of extension; conditions under which the arrangement may be terminated; provision for the continuation of the debtor's business with or without supervision by a receiver, creditors' committee, or otherwise; a provision establishing the priority of debts incurred after filing the petition and during the pendency of the arrangement; and other pertinent matters.

Subsequent to the filing of the petition the court may refer the proceeding to a referee and, upon the application of an interested party, may appoint a receiver. The court may also appoint one or more appraisers to appraise the debtor's property. In any event, after proper notice to the interested parties, accompanied by a copy of the proposed arrangement and a summary of the debtor's assets and liabilities, a creditors' meeting conducted by the judge or the referee is held.

The purpose of the creditors' meeting is to receive proof of claims and to allow or disallow them. It also provides an opportunity to examine the debtor and to receive the creditors' written acceptances of the arrangement. At this meeting the creditors appoint either trustees, a receiver, or some other party to handle, subject to the court, the funds to be deposited by the debtor.

The arrangement is confirmed by the court upon unanimous acceptance of the creditors and the payment of the required deposit by the debtor, although under certain circumstances the plan may be confirmed with less than unanimous acceptance. In the consummation of the plan the debtor is discharged from all debts except those which are nondischargeable and the funds are distributed in accordance with the terms of the arrangement.

The arrangement may be abandoned or withdrawn under certain cir-

cumstances such as nonacceptance by the creditors or nonperformance by the debtor; or it may be set aside for fraud.

RAILROAD REORGANIZATIONS UNDER SECTION 77

The purpose of Section 77 was to provide under the bankruptcy law an effective means for the reorganization of interstate railroads. It extends to the Interstate Commerce Commission as well as to the federal courts wide jurisdiction in such reorganizations.

Under Section 77 a proceeding may be initiated by the filing of a petition with a federal court by the corporation with the approval of the ICC, or by 25 per cent in amount of any class of creditors or 10 per cent in amount of all creditors, likewise with the approval of the ICC. Such petition must state that the corporation is insolvent or unable to meet its debts as they mature.

If the petition is filed by the corporation, the court may approve or dismiss the petition; but if it approves, it takes jurisdiction over all the debtor's property. If the petition is filed by the creditors, the corporation must either admit or deny the petition. If the former, the court approves the petition; if the latter, it tries the issues and either approves or dismisses.

If the petition is approved, the court appoints a trustee or trustees upon the recommendation of the ICC, the stockholders and creditors having the right to be heard on the appointment. The powers of the court and the duties of the trustees are somewhat similar to those under Chapter X proceedings, with the exceptions that the approval of the ICC is required in connection with certain matters and that the court may refer matters to one or more of six special referees appointed by the President with the advice and consent of the Senate.

PROPOSAL OF PLANS

Plans may be proposed by the debtor and by 25 per cent of any class or 10 per cent of all the creditors. All proposed plans must be filed with the Interstate Commerce Commission. The ICC must then hold hearings on the proposed plans and must then issue a report approving one plan, which may be one of those proposed or which may differ entirely from any such proposals. Basically, the ICC report must find with respect to the plan approved (1) that it will be equitable, (2) that it will not discriminate in favor of any class of creditors or stockholders, (3) that it will be financially advisable, and (4) that it will be compatible with the public interest.

The plan is then submitted to the stockholders and creditors for acceptance or rejection. Before confirmation the plan must be accepted by:

1. Creditors holding two thirds in amount of claims of each class whose claims or interests have been allowed and would be affected by the plan.

2. Stockholders holding two thirds of the stock of each class if the debtor is solvent.

If approval within the above requirements is obtained, the approval of creditors and stockholders not accepting the plan is not required, subject to certain provisions for the protection of dissenting minorities.

After acceptance of the plan, the ICC reopens its proceedings to consider the accepted plan and, subject to certain findings, transmits the accepted and approved plan to the court which approves the plan for the record. The ICC also grants to the debtor the authority to issue securities, to assume obligations or transfer property in accordance with the plan, or to merge debtor property if contemplated by the plan.

After confirmation the plan is binding upon the corporation, all of its stockholders, and all creditors whose claims are payable in cash. In addition, it is binding upon unsecured creditors, if two thirds in amount have accepted the plan, and all secured creditors of each class of which two thirds in amount have accepted the plan. Confirmation, as such, discharges the debtor from its debts except as otherwise provided by the plan, and the property is transferred by the trustee to the debtor or new corporation free of debts except as to those reserved.

ANALYZING AND TESTING THE REORGANIZATION PLAN

In the past, reorganization plans have not been adequately tested and analyzed. This unfortunate condition arose out of a lack of pertinent information concerning the fundamental condition of the particular enterprise and its industry. An important contributing factor was the tendency of financial interests and the legal profession to follow the lines of least resistance by resorting to compromises between creditors, management, and stockholders without due regard to the fundamental issues involved. In other words, financial structures were adjusted or pieced together with the hope that future earnings and business prospects would support the revised capitalizations.

Reorganization plans should be analyzed and tested for their soundness and feasibility by creditors, security holders, and the courts as well as by the management and the sponsors of the plan. The first step in this procedure should be a thorough study of the debtor's previous performance. The real causes of failure hereby should be revealed. Any plan of reorganization which fails to eliminate the basic causes of failure should not be submitted to the security holders for their approval. In analyzing

a plan, sufficient information must be made available to the interested parties to enable them thoroughly to understand the plan. Trustees and receivers should issue reports containing adequate and pertinent information similar to the more recent type of reports such as were furnished by the trustee for McKesson and Robbins, Incorporated, in the course of its reorganization.

Generally, a number of plans are proposed and discarded. The final plan or plans are often critically analyzed by the SEC as well as by the various protective committees representing the several parties at interest. A recapitulation of the changes and sacrifices to be made by the respective interests should be prepared as a step in evaluating the possibilities for the success of the final reorganization plan. The objectives of an adequate plan should be reviewed and tested in terms of the broad requirements for a sound reorganization. Past, present, as well as probable future earnings of the reorganized corporation must be carefully analyzed and checked with the terms of the reorganization plan as well as compared with the earnings of other representative enterprises in the same industry. A pro-forma balance sheet giving effect to the provisions of the reorganization plan should be constructed and compared with previous balance sheets of the debtor.

Only through a careful analysis and testing of the reorganization plan may some degree of protection be achieved and the possibility of *throwing good money after bad* be avoided.

HISTORY OF DEBTOR

A thorough study of the background and history of the debtor should be the first step in making a complete analysis and evaluation of any reorganization plan. This study should include several broad lines of investigation and its basic purpose should be to determine the causes of failure which should in turn be subjected to analysis.

Of considerable importance is a knowledge of the initial promotion and incorporation as well as of the subsequent financing of the debtor. Often there are, of course, failures in cases of new and speculative ventures which may be traced to the nature of and the circumstances surrounding the initial promotion. Included in this type of promotion would be: (1) oil and mining speculations; (2) enterprises designed to exploit new inventions and processes; (3) those based on the exploitation of services, names, and so forth; (4) those launched primarily for the benefit of the promoters; and (5) overcapitalized sell-outs of closely held companies. In the case of failures which have occurred in established enterprises, an examination of their past financing should serve to reveal such things as poorly planned expansion programs, defective refunding operations, de-

fective consolidations or mergers, and ineffective reorganizations, all or any of which would have a bearing on the debtor's present predicament and on the proposed plan.

There are certain fundamental elements of any sound promotion. Thus, the extent to which such elements might have been lacking in the initial promotion should be determined. These fundamental requirements of sound promotion include:

1. A sound product or service.
2. Capable management.
3. Adequate capital and facilities.
4. Adequate markets.
5. Complete and thorough investigation of the projected enterprise.

As a part of the debtor's history, the record of the enterprise subsequent to the initial promotion should also be considered. The main objective in this connection should be to measure the success or lack of success of the management. This may be indicated, first, by the adequacy or inadequacy of the earnings over a period of years. It may also be indicated by an analysis of the operating policies for which the management has been responsible, to be followed in turn by an estimate of the effectiveness of those policies. Further, a study of the management's financial policies should be made both as related to the financing of internal growth and the financing of external expansion. Finally, the management's success may be measured by its ability to solve external problems such as (1) market changes, general business conditions, and so forth, (2) political and social changes, and (3) technological changes involving the product or products concerned and production facilities.

The nature of the debtor's business activities prior to, and at the time of, failure is of obvious importance. In the first place it is necessary to determine whether or not those activities served a real economic need, since the absence of such a factor would cast serious doubt upon the economic right of the enterprise to continue its existence. Second, the position of the debtor's industry in its life cycle at the time of failure must be considered in relation to the debtor's business activities, as a basis for determining the future trends which the business must face, as well as the cause of failure.

For example, the characteristic life cycle of an industry includes several well-defined phases. First, there is the *experimental* stage as exemplified by the television industry at present. From this stage an industry passes into a period of *rapid growth* such as is currently being witnessed in the aviation industry. There follows a period of *stability* in which

growth is at a diminishing rate, as is presently characteristic of the electric utilities; and this may be followed by a period of *decline* such as is found in the anthracite coal industry. Finally, there may be a period of *obsolescence and decay* in which, for example, the traction industry finds itself today, but which is sometimes followed by a period of *rejuvenation and new development*—an example of the latter being the conversion of obsolete traction systems into modern and efficient bus lines.

Obviously, one's evaluation of a reorganization plan will depend to a large extent upon the period in this cycle in which failure occurs. If failure occurs in a period of stability, it must be recognized that a period of decline for the industry as a whole eventually may lie ahead. If failure occurs in the period of obsolescence, it must be recognized that there is little hope for the future of the industry unless possible new developments are impending. Consequently, while realizable values may exist in such a situation, the plan must be drawn in accordance with the cyclical realities. On the other hand, there may be considerable potentialities on which to base a reorganization plan if failure has occurred in the experimental phase or the phase of rapid growth.

At this point, after a thorough consideration of the debtor's background and history, it should be possible to determine and analyze the real cause or causes of failure—whether the causes are external or internal; the type of failure; and whether it is a case of reorganizable or of confirmed insolvency.

OBJECTIVES OF AN ADEQUATE PLAN

Any reorganization plan that is to be considered adequate should have certain well-recognized objectives which should be borne in mind in its evaluation. It should, of course, serve to preserve the debtor's corporate assets, both tangible and intangible. It should also realize all of the values inherent in the enterprise, a purpose toward which the ability and acuity of the trustees may contribute in large measure. The plan should also have as a major objective the elimination of the real causes of failure as distinguished from the stated causes.

No plan, however, may be considered adequate that does not have as an objective the fair and equitable allocation of values to security holders and creditors, and in this connection the doctrine of absolute priority must be applied. Briefly, this means that the full value of any property must be applied to the claims of the bondholders before any participation by the stockholders. It is also true that bondholders and creditors are entitled to first consideration in the adjustments of the reorganized company's capital structure. This priority of creditors is absolute and cannot be waived even by voluntary action of a majority of the creditors

themselves. The only situation in which stockholders may be considered prior to the satisfaction of the creditors is where the stockholders have supplied new funds for the reorganization.

The final objective should be the emergence from reorganization of a corporation with a sound financial structure based on sound estimates of future earnings and not on wishes or guesses. Such estimates should be based on past experience as modified to allow for estimated future changes. Any such structure should anticipate that the reorganized company should be able to pay fixed and contingent interest charges as well as to provide dividends on preferred and common stock even during periods of depression, particularly if security holders are required to put up new cash capital.

EARNINGS AND BALANCE SHEET TESTS

The procedure which may be followed in appraising the soundness and fairness of proposed reorganization plans includes, among others, earnings tests and balance sheet tests, all of which are relatively simple.

The following *earnings tests* may be applied and are presented in outline form for ready reference:

1. Compare past earnings for 5 years or more with:
 - a. Proposed capitalization.
 - b. Reappraisal of assets.
2. Determine times-earnings ratio of *new fixed charges* on basis of:
 - a. Past earnings.
 - b. Current earnings.
 - c. Probable future earnings.
3. Compare past and readjusted earnings per share for new securities to be outstanding.
4. Compare estimated future earnings with those of other companies in the industry.

The *balance sheet tests* should be made by constructing a pro-forma balance sheet giving effect, as proposed in the reorganization plan, to changes in the following items:

1. Working capital:
 - a. New cash to be raised.
 - b. Proposed adjustment of current asset values; for example, writing off bad debts or revaluation of inventories.
 - c. Proposed changes in current debt.
2. Fixed assets:
 - a. Write-downs and write-offs.
 - b. Liquidation of unused assets for cash or in exchange for cancellation of old debt.
3. Long-term debt:
 - a. Conversion of first mortgage bonds into secondary liens.
 - b. Conversion of debt into preferred or common stock.

4. Equity ownership:
 - a. Reduction or increase in preferred stock.
 - b. Changes in common stock including possible effect of warrants, and so on.
 - c. Changes in surplus.

OTHER TESTS

In addition to the above tests which will provide a statistical basis for testing the plan, a number of other less specific but, nevertheless, extremely important tests must be utilized. For example, once the required earnings under the new financial structure have been determined, it is necessary to determine the likelihood that those earnings will be achieved in the future. The long-term possibilities may be appraised on the basis of the phase of the life cycle in which the industry finds itself. However, it is also necessary to appraise the ability of the enterprise to reorganize its production facilities, to develop new markets, to develop new products or new uses for old products, and to maintain its competitive position. All these factors should enter into an appraisal of potential profits and earnings.

All reorganization plans involve technical difficulties in their carrying out. Therefore, in testing a plan it is necessary to consider any such difficulties which might be a bar to the consummation of the reorganization. These may take the form of legal problems or the problems involved in adjusting the differences between conflicting interests. Such technical difficulties should be sought for, and, if present, should be recognized as defects in the plan.

It is also true that, as proposals are made for changes in the proposed plan, the sponsorship of such proposals should be examined for the purpose of detecting the possible existence of selfish motives not consistent with the interests of all the parties concerned. Such examination should be objectively applied to all proposals whether submitted by management, financial interests, creditors, stockholders, or the SEC.

Finally, one must arrive at a conclusion as to the fairness and feasibility of the proposed plan. The fairness of the plan may be determined on the basis of the earnings tests and balance sheet changes as affecting the old secured creditors, unsecured creditors, equity owners, and management. The practicability of the proposed plan may be tested in accordance with one's appraisal of the soundness of the financial plan based on fair values and expected adequate earnings with reasonable allowances for future expansion; one's judgment as to whether the causes of failure have been eliminated and competent management provided; and whether the fundamentals of a sound reorganization (as previously outlined) are present.

COLORADO FUEL AND IRON REORGANIZATION

It will, perhaps, be helpful to consider an actual reorganization plan in light of the foregoing discussion. For this purpose, the plan used will be that of the Colorado Fuel and Iron Company on the basis of which that company was reorganized.

First, what were the basic causes for Colorado Fuel and Iron's failure? Very seldom is there found in the plan itself, or the report of the trustee, a recognition or a statement indicating the really fundamental causes. Generally speaking, if the plan or report is dominantly sponsored by the debtor management or their attorneys, the statement will make the typical excuse that probably the failure was due largely to lack of working capital or to general economic conditions and business conditions that were more or less beyond the management's control. The Colorado Fuel and Iron situation was typical of that, and it is very difficult to find in the plan itself much recognition of what the fundamental causes were. Here and there, however, will be found phrases or short sentences giving clues to the real causes.

The causes of the failure of Colorado Fuel and Iron were threefold. First, the biggest single cause of the failure was an economic condition in the steel industry typical of Colorado. The company was located in Colorado and it was essentially a very high-cost producer, partly because of the high cost of its raw materials and partly because of the peculiar operating conditions which obtained. The company's basic raw material deposits were not of a high-grade character. It had very good coal, but the coking processes were not competitively equal to the principal steel-producing areas in other sections of the country. Second, from a marketing standpoint the company had developed, over a period of years, primarily into a producer of heavy steel products, largely serving the railroad market for steel rails, which comprised by far the largest proportion of its business. It had some consumer goods type products, but the bulk of its production was heavy steel. Moreover, when the railroads awarded their rail contracts, the greater portion went to the major steel producers with only a minor share going to Colorado.

The third cause probably was due largely to the fact that the management was not particularly able. It was a management that had carried on over a period of years. It had not taken the initiative in developing its potentialities in cutting its costs, and had proved, generally, to be somewhat less than aggressive. Therefore, as the steel industry moved westward, with the major steel interests moving first into the Chicago area and then to the Pacific Coast, there was no inducement for them to acquire Colorado Fuel and Iron. Thus, when the depression came, particularly as it affected the railroads with consequent reductions in require-

ments for rails and other heavy steel products, there was no alternative for the company but to go through receivership and reorganization.

CHANGES IN CAPITAL STRUCTURE

Table 20 is an analysis of the reorganization plan of the Colorado Fuel and Iron Company showing the proposed changes in capital structure as they would affect the size of the long-term debt, interest requirements, preferred dividend requirements, and so forth. The table shows the old securities, the treatment that each was to receive, and the figures for the old capitalization and for the proposed capital structure. It will be noted that Plan A is based on the effects of the proposed plan *without* the exercise of warrants authorized thereunder. Plan B is based on the assumption that all of the warrants authorized will be exercised.

Briefly, the old capitalization consisted of \$4,500,000 of Colorado Fuel and Iron Company general mortgage 5s of 1943 which were to be undisturbed by the plan. The remainder of the funded debt was comprised of \$27,633,000 of Colorado Industrial 1st 5s of 1934, which were to receive for each \$1,000 claim, \$400 principal amount of new 5 per cent income mortgage bonds and 20 shares of new common at \$35 per share.

In addition, there were 20,000 shares of 8 per cent cumulative preferred stock which was to be wiped out and each share given the right to subscribe to 3 shares of new common at \$35 per share. The common stock, of which there were originally 340,505 shares, was to be given no consideration other than the right to subscribe to $\frac{3}{4}$ share of new common at \$35 for each share of the old.

TABLE 20

Analysis of Reorganization Plan
COLORADO FUEL AND IRON COMPANY
CAPITALIZATION

Security	Treatment (Terms per \$1000 of claims)	Old	Plan A New	% of Old	Plan B New	% of Old
Colorado Fuel and Iron Company, General Mortgage 5s, 1943	Undisturbed by plan	\$4,500,000	\$4,500,000	100%	\$4,500,000	100%
Colorado Industrial 1st 5s, 1934	(a) \$400 principal amt. of new 5% income mortgage bds. (b) 20 shares of new com.	27,633,000	11,053,200	40%	—	—
8% Cumulative preferred stock (100 par)	Subscription rights to 3 new common @ \$35 per share	2,000,000 (20,000 shares)	—	—	—	—

TABLE 20 (Continued)

Analysis of Reorganization Plan
COLORADO FUEL AND IRON COMPANY
 CAPITALIZATION

Security	Treatment (Terms per \$1000 of claims)	Old	Plan A New	% of Old	Plan B New	% of Old
Common stock	Subscription rights to ¾ share, new com- mon @ \$35 per share	340,505 shares	—	—	—	—
Common stock						
a. Received by Colo. Industrial 1st 5s	—	—	552,660 shares	—	552,660 shares	—
b. Warrants issued to pfd. stk.	—	—	—	—	60,000 shares	—
c. Warrants issued to common stk.	—	—	—	—	255,379 shares	—
TOTAL COMMON		340,505 shares	552,660 shares	163%	868,039 shares	255%

EARNING REQUIREMENTS ON ABOVE CAPITALIZATION						
Interest requirements	as	\$225,000	\$225,000	100%	\$225,000	100%
Colorado Fuel and Iron 1st 5s, 1943						
Colorado Industrial 5s, 1934		\$1,381,650	\$552,660*	40%	—	—
TOTAL INTEREST REQUIREMENTS	above	\$1,606,650	\$777,660	48%	\$225,000	14%
8% Cumulative pfd. dividends		\$160,000	—	—	—	—
Total requirements be- fore common	"	\$1,766,650	\$777,660	44%	\$225,000	12%
Additional earnings re- quired to show \$2 per share on common stock (\$35 per share)		\$681,010	\$1,105,320	162%	\$1,736,078	256%
Total earning required to show \$2 per share on common	"	\$2,447,660	\$1,882,980	77%	\$1,961,078	80%

* No interest on this issue is payable prior to 4/1/36; in years ending 3/3/37 and 3/31/38, interest is payable only to the extent earned and declared; after 4/1/38, interest will be fully cumulative at the rate of 5 per cent per annum and will be required to be paid to the extent earned.

The plan provided that upon the exercise of the warrants the proceeds would be used to retire the new income bonds. Thus, under Plan B, which contemplates the exercise of all warrants, effect has been given to the proposed retirement of that issue.

An examination of the table will show that under Plan A, while reductions were made in fixed charges and preferred dividend requirements, this was done by increasing the common stock equity. Thus, such overcapitalization as existed in the old setup has, in effect, largely been transferred to the ownership interest. Under Plan B, which assumes the exercise of outstanding warrants, this situation is even more pronounced.

It is important, however, to examine any proposed plan with extreme care, since provisions of potential importance frequently will be found, and frequently they will be buried in such a way that they are not readily obvious. A perfect illustration of this is found in the Colorado plan. The plan states:

A sound plan of reorganization must provide a financing medium for possible future financial requirements of the new company. In this connection, it must be recognized that many of the operating properties of the present company, although capable of economic operation, are old, and consideration must be given to the possible necessity of modernizing equipment as well as to the possible need for more working capital at some time in the future. To provide a financial medium for such requirement, the plan provides for the creation at some future time by the new company of an issue of first and refunding mortgage bonds which will rank ahead of the income mortgage bonds. These first and refunding bonds may be authorized in the maximum amount not exceeding \$15,000,000 of which \$4,500,000 or a lesser amount as shall be required for the purpose will be reserved to acquire and refund the Fuel bonds. The balance may be issued when authorized by a vote of two-thirds in number of the entire Board of Directors for such purposes and under such restrictions as may be expressed in the first and refunding mortgage. *It is not proposed to issue any first and refunding mortgage bonds in the reorganization.*

Upon consideration it will be realized that the security holders in approving the reorganization will have authorized the new board of directors and the management to issue a net of \$11,500,000 of new bonds, when, as, and if they see fit, there being \$4,500,000 to be deducted from the proposed \$15,000,000 to be used to pay off the Fuel bonds. Referring to the table, we see that by adding \$11,500,000 of first and refunding mortgage bonds to this plan, not only will the overcapitalization be perpetuated, but it may be substantially increased.

While no interest rate was proposed, it would be assumed that the interest rate under the conditions then obtaining would probably be in the neighborhood of at least 4 per cent and might well be 5 per cent. Of course, subsequently, with lower money rates and improved earnings, a

lower coupon rate could be applied. However, giving effect to that \$11,500,000 of additional debt, there would be, in addition to the earnings requirements shown in the table, an increase in debt service requirements of \$460,000 at 4 per cent. Therefore, the company, in order to cover interest charges plus the \$1,736,000 needed to show \$2 per share on the new common, would have total earnings requirements of \$2,421,000. This seems to indicate rather clearly that the overcapitalization which formerly existed in the debt structure has now been partly continued in the debt structure and partly transferred to the equity structure, since, under the old company, earnings of \$2,447,660 were required to cover the old interest requirements and show, at the same time, \$2 per share on the old common stock.

The net result in such a situation is that when, by the issuance of so many warrants, a condition of overcapitalization is perpetuated, the opportunity for the new security holder is not sufficiently attractive for him to exercise the warrants. In this particular case the stockholders were wiped out, in effect, by being allowed to subscribe to three-quarters of a share of new common at \$35 per share for each old common share, and the right to subscribe to 3 new common shares at \$35 per share for each old preferred share. However, if the reorganization plan is made sufficiently attractive and the condition of overcapitalization is not perpetuated, the holder, if he can see his way clear toward a recovery in earning power, will exercise those warrants.

This has not been done to date. Very few of these warrants have been exercised and they are still outstanding. The history of Colorado Fuel & Iron since the reorganization has been such that the stock has seldom sold at a market price that would justify their exercise.

For example, the price range of the preferred prior to reorganization, which was approved April 1936, was from 108 $\frac{1}{8}$ in 1924 to a high of 140 in 1928. It subsequently ranged from 137 $\frac{1}{4}$ in 1929 down to a low of \$29 a share in 1935 and moved up to \$49 in 1936, partly on the basis of good earnings and partly on the anticipation that the plan was to be declared operative.

The old common had a high of 96 $\frac{3}{8}$ in 1927. Through a recapitalization the old common was changed to new no-par stock in 1931 and the high that year was 19 $\frac{1}{2}$ with a low of 6 $\frac{1}{2}$. Finally, in 1935, prior to the approval of the plan, it reached a low of 50 cents per share and a high of 5 $\frac{1}{2}$.

In 1936, after the plan was declared operative, the new common had a high of 48 and a low of 28 $\frac{1}{4}$. In 1937, it had a high of 51 $\frac{7}{8}$ and a low of 11 $\frac{1}{4}$. Since 1937, it has never risen above the 1937 high.

The company did pay an initial \$1 dividend in March, 1937. Some

additional dividends have been paid since, but only during one or two years of exceptionally high profits, largely during the war period. The stock is now back on a nondividend paying basis and the range in 1945 was from a high of $18\frac{3}{8}$ to a low of 14. As of September, 1946, the high for the year was $23\frac{3}{4}$ and the low was $10\frac{3}{4}$.

The warrants to subscribe to stock at \$35 a share meant, of course, that if a person was going to exercise those warrants, he would have to see sufficient earnings per share in sight and a price warranted by those earnings per share before he would do so. Such a situation has never materialized to justify that action.

CONTRASTS IN McKESSON AND ROBBINS PLAN

In view of the fact that an overcapitalized situation seems clearly to have been perpetuated in the Colorado reorganization, it will be interesting, by way of contrast, to consider a reorganization in which this was not true before continuing the discussion of Colorado Fuel and Iron.

The McKesson and Robbins' reorganization frequently has been mentioned as one example of an outstandingly successful reorganization. Under this plan the principal amount of the old capitalization that had to be treated amounted to approximately \$33,495,000, of which about \$3,800,000 was accrued interest. The bondholders in this plan not only received all their accrued interest on the old securities, but in addition received 40 per cent in cash or approximately \$15,800,000 which was raised by the liquidation of certain properties. They also received \$11,874,000, or 40 per cent, in principal amount of new debentures, and, finally, 20 per cent in new stated value preferred stock in the amount of \$5,800,000.

The new debentures never sold below par, and, in fact, they sold at a premium most of the time. The new 5 per cent preferred stock also sold at a premium. Thus, actually, the mercantile creditors and the bondholders came out extremely well.

The earnings were ample to take care not only of the bonds and the preferred stock, but of the new common as well. The bonds had an earnings coverage of something like $12\frac{1}{2}$ times. The preferred stock had a coverage of well over 5 times, and very shortly after the reorganization, the new common was immediately put on a dividend-paying basis. The earnings continue to show up very well.

New common was issued in exchange for the old preference stock. The old preference stock, which amounted to \$34,000,000 in principal amount plus unpaid dividends, received 1,370,000 shares of new common stock, which had an indicated market value, even in the reorganization, of around \$20 per share. Thus the old preferred stockholders received

within \$10,000,000 of the principal amount of their interest in the property, including the unpaid dividends. It was not long before the common advanced in price, and the earnings picture was so favorable that the old preferred stockholders had an interest in the new common that was the equivalent of more than 100 per cent of their old holdings.

The common stockholders received 315,768 shares of new common for 1,263,053 shares of old, or approximately 25 per cent. Thus, they did not recover their investment quite as quickly or as readily as the preferred stockholders. It should be recognized, however, that there are two basic problems in any reorganization plan. One is whether or not the outlook for the company, the conditions of the industry, the growth factors, will all contribute to making possible a recovery of the basic earning power. The second is whether or not the capital structure has been fitted properly to the new estimated earning power so that the security holders will have the opportunity for a substantial recovery. In this case, both of these factors operated favorably.

OTHER ASPECTS OF THE COLORADO REORGANIZATION

It was mentioned previously that one criterion of any reorganization plan is the extent to which the management will pass into new and more capable hands. In the case of Colorado Fuel and Iron, practically no change took place. The president continued as a trustee during the reorganization and subsequently became the president of the new company. Admittedly, it is frequently found that the old management, or at least elements of the old management, may be retained after reorganization with excellent results.

It is clear that the proposed plan contemplated a certain amount of internal reorganization and rehabilitation of plants and that subsequent to the reorganization it was proposed to raise money for this purpose. This proposal was quoted previously, directly from the plan, and involved the issuance of first and refunding mortgage bonds for the purpose of modernizing and rehabilitating equipment.

Certain devices are frequently used in connection with reorganization plans in order to make them more attractive to the security holders and to facilitate and effect the necessary exchange of securities. Included in these are such features as conversion privileges, warrants, attractive call and sinking fund provisions, and the inclusion of participating features in preferred stock issues. Many times such features have only a speculative value, but do represent, however, a "sweetening" of the offer.

In the Colorado Fuel plan there was practically nothing of this nature, since there was nothing available to provide any basis of value for such a feature. The warrants which were to be issued were not designed to

increase the attractiveness of the plan. They were to be issued solely for the purpose of allowing the preferred and common stockholders, who had been wiped out by the plan, to continue their interest at a cost of \$35 per share if they so desired. In no sense could the warrants be considered an added inducement.

In studying any reorganization plan it is desirable to analyze past earnings, sales, volume of production, and so forth, on the basis of which analysis of those past earnings may be projected against the new capitalization. In this way it is possible to demonstrate how the new capital structure would have been supported by past earnings. Although this is an extremely effective method of analysis, it is perhaps more valuable as applied to railroads and public utilities than as applied to industrial companies. In the case of industrial companies, the whole earning-power picture is subject to adjustment, not only as a result of general business conditions and conditions within a particular industry, but also as a result of such changes in earning power as may be brought about through changes in internal management and internal corporate setups, changes in products, markets, and so forth. Therefore it is necessary, to some extent, to project earnings into the future with such factors in mind in order to determine what the estimated coverage for the new securities will be.

Briefly, when this test was applied to Colorado Fuel and Iron the outlook was not very promising. However, as an illustration of the possibilities mentioned above, the McKesson and Robbins reorganization is a striking instance. McKesson had been put together as a rather loose consolidation comprised of a number of wholesale drug units, and under the Coster-Musica regime the full benefits of that consolidation had never been attained. Actually, the first year the company was in receivership it earned more money than it had ever earned before because, under the trustee's administration, the full resources and earning power were brought back into focus. In addition, certain units were added and other units were dropped with further beneficial effect upon the earnings.

In every plan there are technical elements that are important as relating to the treatment of the old security holders in relation to claims, rights, indenture provisions, and so forth. The Colorado plan contains several illustrations of such elements. For example, as to the treatment of security holders, the plan states:

With the fixed interest charges drastically reduced and the interest on the new income mortgage bonds being deferred until April 1, 1936, and payment of interest thereafter being contingent on earnings, it is felt that the existing working capital will be sufficient without calling upon the stockholders for an assessment to provide additional funds. A present assessment under existing circum-

stances would, in many cases, impose a severe hardship on stockholders and might in some cases result in wiping out their interest in the property.

The point here, of course, is that while no assessment as such was levied on the stockholders, the only possible way for them to retain any interest was through the exercise of warrants and subscription to new stock at \$35 per share. Despite the foregoing statement, the stockholders' interests were quite effectively wiped out, subject to exercise of the warrants.

The plan further states:

In the relative treatment of preferred and common stockholders recognition has been given to the fact that while the preferred stock, of which only 200,000 shares are outstanding, has a cumulative priority over the common stock in the distribution of earnings, it has no priority in the distribution of assets on liquidation. The preferred stockholders, therefore, are accorded the right to purchase for each share of present preferred stock held a substantially larger proportion in the stock of the new company than they held in the old company.

It was because of the second of the above provisions in the preferred stock that it was possible in reorganization, in effect, to wipe out the preferred stockholders.

The plan also says:

Although the number of shares of common stock of the new company will be greater than the number of shares of the present common stock now outstanding, the amount of securities will be materially reduced. As indicated above, the total interest charges, both fixed and contingent, ranking ahead of the new common will be less than half the present fixed interest charges, and moreover, there will be no preferred stock. In addition, all cash proceeds of the exercise of warrants are dedicated to the retirement of the income mortgage bonds and the income mortgage bonds may be tendered at their principal amount in payment of the warrant subscription price. Accordingly, it may be expected that when all the warrants under the plan are exercised, practically all of the income mortgage bonds will be retired.

Eventually the income mortgage bonds were retired, but not by the operation of the warrants. However, the point that is revealed in this statement is that it was recognized that there would be a substantial increase in capitalization.

ACTUAL EXPERIENCE OF SECURITY HOLDERS

After one has made a thorough analysis of the past earnings and a projection of future earnings, and has covered the new capital requirements and the rehabilitation of working capital position as well as the revaluation of fixed assets and any write-downs or write-offs or liquida-

tions, inventory, and so on, one finally comes down to the question of how a security holder will fare under the terms of the reorganization.

In the case of Colorado Fuel and Iron, the results are rather interesting. First, the General Mortgage Fuel 5s of 1943 were undisturbed in the reorganization. Thus, over a 16-year range from 1924 to 1941, this bond sold at a high of 108 and a low of $26\frac{1}{2}$. Theoretically, if one had been able to buy these bonds in 1933 at \$265 for a \$1,000 bond, one would have had a value as high as \$1,080 in 1936 and 1937 and in 1941 would have ended up with \$1,055 at $105\frac{1}{2}$. Actually, if one had held these bonds through the entire reorganization, no loss would have been suffered. Obviously there was an opportunity for substantial profit if they had been purchased at or near the low of $26\frac{1}{2}$.

The holders of the Colorado Industrial 1st 5s of 1934 received \$400 of new income 5s and 20 shares of common stock. In the market of April 30, 1941, which was after a considerable period had elapsed subsequent to the reorganization, the income 5s were selling at 78. The common stock on that date sold at $15\frac{3}{4}$. Thus, the market value of the securities received in exchange for one \$1,000 bond was \$627. In addition, the holder would have received \$20 in interest on his income bond and \$40 in dividends on the common.

On the other hand, on the basis of the low in 1938, the original holder of the Industrial 1st 5s of 1934 would have realized \$342.50 on a \$1,000.00 investment with the income bonds selling at 40 per cent of par and the stock selling at $9\frac{1}{8}$. Thus, theoretically, a high of \$627.00 and a low of \$342.50 could have been realized between the two dates of 1938 and 1941. In that case, the original holder never would have been able to recover his full investment in the old company.

The result for the preferred stockholders is quite different. The preferred stockholders were given the right to subscribe to three shares of common at \$35.00 per share. The cost of exercising that warrant required an investment of \$105.00. The old preferred stock sold at \$140.00 in 1928. Therefore, if the preferred stock had been purchased at that price, and the warrants exercised, the total investment per share of preferred would have been \$245.00 for which the holder received 3 shares of common worth, in April, 1941, $15\frac{3}{4}$, or \$47.25. Theoretically, the loss would have been \$197.75. If the common had been held and sold at the high of $51\frac{7}{8}$, approximately \$158.00 would have been realized and a loss of approximately \$87.00 sustained.

The common stockholders received a warrant to subscribe to three quarters of a share of stock at \$35 per share. A holder of 100 shares of the old common could have subscribed to 75 new shares at a cost of \$2,625. If the old common had been purchased at its high of $84\frac{1}{2}$, or

\$8,450, the total investment in the new common would be \$11,075 which, at 15¾, would represent a theoretical loss of \$9,984. If the new common had been sold at the high of 51⅞ a loss of \$7,185 would have resulted.

If the old common had been purchased at the low price of 50 cents, and the required amount of \$2,625 invested in 75 new shares, a theoretical loss of approximately \$1,495 would have resulted when the new common sold at 15¾. However, if by good trading and by careful observation it had been possible to sell the new stock at the high of 51⅞, a theoretical profit of approximately \$1,225 would have been achieved.

The foregoing discussion must be considered to be highly theoretical, since neither the preferred nor common stockholders exercised their warrants. It does serve, however, to bring out the fact that under the proposed capitalization there was very little, if any, opportunity for the stockholders to recover their losses. The conclusion to be drawn is that in any reorganization it is preferable to undercapitalize the company, thus providing an inducement to the exercise of such warrants as are issued and providing the stockholders an opportunity to recover, at least partially, their lost equities.

REVIEW QUESTIONS

1. What were the purposes of the original Bankruptcy Act of 1898 from the point of view of:
 - (a) Society?
 - (b) Creditors?
 - (c) Honest debtors?
 - (d) A going concern vs. one headed for liquidation?
2. Under Chapters X and XI, and Section 77 of the Bankruptcy Act:
 - (a) How may bankruptcy, assignments, attachments, and foreclosure proceedings be forestalled by the debtor?
 - (b) The approval of what percentage of creditors, in amount of claims only, is required before the settlement of claims of all creditors of that class can be valid?
 - (c) What safeguards tend to protect security holders and creditors by preventing inefficient management from retaining control of the business during reorganization?
 - (d) What condition permits possible continuation of a state of overcapitalization?
 - (e) How may minority creditors be denied adequate protection?
 - (f) What agency retains authority for the appointment of trustees?
 - (g) Who may submit reorganization plans for the consideration of the court?
 - (h) What safeguards are intended as protection against fraudulent debtors?
3. Distinguish between "the doctrine of absolute priority" and "the doctrine of relative priority" in the settlement of corporate reorganizations. Which doctrine is currently being followed?
4. What are the fundamental requirements of a sound reorganization?

5. Under Chapter X of the Bankruptcy Act:
 - (a) What jurisdiction is conferred upon federal courts?
 - (b) How are reorganization proceedings initiated?
 - (c) During the period of the proceedings, what steps are taken by the court to preserve the assets?
 - (d) What provisions are generally included in a reorganization plan submitted to the court for approval?
 - (e) What agencies and claimants must approve a reorganization plan before it can become effective? The approval of what stockholders and creditors is not required?
6. What factors determine whether a corporation reorganizes under Chapter X of the Bankruptcy Act or under Chapter XI of the Bankruptcy Act?
7. As provided for by Chapter XI of the Bankruptcy Act:
 - (a) Define "arrangement." What provisions are included in an "arrangement"?
 - (d) In what important aspects do reorganization proceedings under Chapter XI differ from reorganization proceedings under Chapter X?
 - (c) Under what circumstances may an arrangement be withdrawn or abandoned?
8. Under Section 77 of the Bankruptcy Act for Railroads:
 - (a) What groups may petition for a proceeding?
 - (b) In what important aspects do reorganization proceedings under Section 77 differ from those under Chapter X?
9. In making a company analysis and evaluation of any reorganization plan, what important factors are reviewed in the study of the background and history of the debtor?
10. What are the objectives of an adequate reorganization plan?
11. What earnings tests may be applied to a plan in appraising its soundness; what balance sheets tests; what other tests may be applied?
12. What devices are frequently used in making reorganization plans more attractive to security holders so as to facilitate the necessary exchange of securities?

PART III

The Investment Banking Machinery

PRIVATE NEGOTIATION IN THE ORIGINATION OF SECURITIES

*by Dr. John H. Prime, Professor of Finance,
Graduate School of Business Administration,
New York University*

THE INVESTMENT BANKING HOUSE, in underwriting an issue, buys that issue for one purpose, namely to resell it at a profit and thus obtain just compensation for the professional services performed for the issuer and investor, and for the risk that is assumed. Obviously, therefore, in the underwriting of any issue there is, first, the problem of buying, and second, the problem of selling. We shall give consideration first to the buying of the issue and direct our attention later to the selling operation.

BUYING INDUSTRIAL ISSUES

Industrial issues are generally bought by direct and private negotiation between underwriters and issuers. This is in contrast to the competitive bidding method, which today applies most generally in the issuance of railroad, public utility, and municipal issues. In private negotiation there is direct dealing between an issuer and an investment banking house, in its role as an originator. These negotiations may continue over a period of months before a decision is reached as to the amount and type of security which best fits the needs of the issuer and is also best suited to then existing market conditions. There is an old axiom that an issue that is well bought is half sold. Therefore, it is of the utmost importance to successful underwriting, from the standpoint of the investment banker, to buy issues well—in other words, to buy issues that are soundly set up and can be readily and profitably sold.

PRELIMINARY INVESTIGATION

Let us assume, therefore, that an industrial corporation is contemplating obtaining additional capital through the issuance of securities. The proper officer of that corporation first discusses the problem with an investment banker. The latter must decide whether or not the situation

is sound and whether or not he is prepared to underwrite and offer securities of this corporation to the public. Further, he must provide the corporation with the best possible advice on its problem. In order to reach a decision and properly to advise the corporation, not only as to the type of security best suited to its needs, but also as to the amount of the issue which would be sound both in relation to its needs and its capital structure, a preliminary study and investigation is made by the buying department of the investment banking house. This includes analyzing the financial statements of the company, the position of the company in the industry, the character of its product or products, and the market that it serves.

The investment banker also makes an analysis or examination of the plant and equipment of the company, by means of which values, as stated in the balance sheet, are verified. The balance sheet as submitted might show a rather sizable valuation in the plant account, but personal inspection of the plant may indicate that part of the plant is not operating or is not in good condition and needs a large amount of maintenance and repair work. Therefore, the investment banker may not accept the balance sheet statement at its face value, but must use its own engineers or hire an independent engineering firm to make an on-the-spot examination of the plant and of the equipment.

In addition, there are always legal questions that arise and which must be looked into, such as the question of any patents or licenses that the company may have, any leases, any contracts it has which would affect its position in so far as the payment of interest or dividends is concerned. These questions are naturally taken into consideration and customarily reviewed by the counsel employed by the investment banker.

This preliminary investigation by the buying department will enable the house to decide whether or not it should be interested in financing the corporation. It is, of course, possible that a decision may be reached not to go forward with the business even if the issue appears sound, if it appears that the type of security proper for the issuer might be extremely difficult to sell under market conditions obtaining at that time.

INFORMAL AGREEMENT

The decision to underwrite the issue is generally followed by what may be called a *negotiation conference* between the representatives of the underwriting house and the officers of the issuing corporation. At this conference an over-all informal agreement is reached covering a large number of points. This agreement may be oral or, as is probably more usual, it may be in the form of a letter prepared by the underwriter and accepted by the corporation.

This informal agreement should cover the amount and type of security which has been determined to be best suited to the issuer's needs and an outline of the various provisions and limitations to be incorporated in the security. It should also cover the general plan of procedure to be followed, noting such corporate action as must be taken to issue the security legally.

It is helpful to draw up a tentative time schedule as to the steps which must be taken. This covers tentative dates for any stockholders' meetings which must be held, directors' meetings, deadline dates on which the issuer's accountants should have financial statements prepared, tentative dates for filing of the registration statement, its effectiveness, the public offering of the securities, and the closing date.

Inasmuch as a considerable period of time is required for the preparation of a registration statement and inasmuch as after filing it with the Securities and Exchange Commission another 20-day period must normally elapse before the security is offered to the public, it is virtually impossible to arrive at a definitive public offering price until a very few days prior to the actual offering because of the possibility of changes in market conditions. Customarily, therefore, the underwriter states in this agreement that, based on market conditions then prevailing, he feels the security could be offered at a given price and that the underwriting spread should be a given amount per share or per bond dependent on the security. Often the underwriter agrees that the underwriting spread as determined at this time will be the final underwriting spread when the issue is offered regardless of whether the public offering price is higher or lower than the price at which he feels the security could then be sold.

Since the preparation of a registration statement, and the preparation of the various financial statements which must be included in it, require normally anywhere from 30 to 60 days, it is advisable that this informal agreement cover as large a list of the salient provisions of the issue as possible. In this list should be included such points as:

1. The amount of the issue to be authorized.
2. The amount to be initially issued.
3. Whether or not the security is to be listed on a stock exchange.
4. Any provisions limiting creation of debt.
5. Any provisions limiting the authorization or issuance of any prior ranking security.
6. Any provisions limiting the issuance of additional amounts of the security authorized.
7. Any provisions limiting the payment of dividends on the part of the issuer.

8. Provisions covering voting rights, if any.
9. Any provisions requiring the consent of a certain percentage of the holders of that security to consolidation or merger or any other change in the status of the issuer.
10. Any provisions giving special rights to the holders of the security in case of default of interest or dividends.
11. Provisions relating to the sinking fund.
12. Provisions relating to redemption of the security including its call price or prices.

The more points which are definitely agreed upon in this initial understanding, the less likely will be any disagreements or misunderstandings on the many provisions which enter into any security as the weeks go by in which this initial informal agreement becomes formalized through the registration statement, the prospectus, the underwriting agreement, the amendments to the company's charter which may have to be made, and so forth.

PREPARATION OF FORMAL DOCUMENTS

When the various points to be covered in this preliminary agreement have been definitely determined and approved by all of those whose approval is necessary, actual work starts on the preparation of various formal documents. Included in these documents, in addition to the registration statement and prospectus, there may be an amendment to the issuer's charter together with a proxy statement outlining the proposed amendment if such action is necessary to enable the corporation legally to issue the security decided upon; a mortgage in the case of a bond secured by a mortgage on the issuer's property; an indenture in the case of an unsecured debenture issue; and so on. In the preparation of these documents, members of the buying department of the underwriter together with representatives of the underwriter's counsel collaborate with such officers of the issuer as may be designated to work on the registration statement together with representatives of counsel for the issuer. The issuer's independent accountants will, of course, conduct a certain amount of their work independently but will also collaborate with the aforementioned groups on any matters coming within their scope.

Concurrently, the underwriter and his counsel must prepare the *purchase or underwriting agreement* and a second document called the *agreement among underwriters* or the *purchase group agreement*. Attention will be devoted first to the reasons for the formation of a purchase group, next to the purchase agreement, and then to the purchase group agreement.

THE PURCHASE GROUP

In the underwriting of any issue, the house undertaking that underwriting has the problem of distribution which involves two things: one, a distribution of the liability, and two, a distribution of the securities. Basically, the formation of the purchase or underwriting group represents a distribution of the liability. The house which originates an issue would be liable for the entire issue, unless other houses joined in the purchase by becoming members of the purchase group. There are many reasons why it would not be willing to assume the entire liability for an issue. In the first place, however large may be its capital, it is nevertheless limited, and the underwriter cannot afford to assume too large a liability in relation to its capital in any one particular security. In the second place, the underwriter cannot afford, from the profit standpoint, to have a disproportionate amount of its capital tied up in one issue for an unreasonably long period of time. It needs part of its capital free to participate in other issues, because, after all, its profit is largely dependent upon the number of issues in which it can participate. Therefore, in the formation of the purchase group, or buying group, the objective is the distribution of the liability involved in the issue.

For the aforementioned reasons, then, the originator invites other houses to join with it in the purchase of the security to be issued. Of course, the originator of an issue customarily acts as the manager of the group of underwriters.

The number of houses which will be invited to join will vary according to the size and character of the issue. Obviously, the larger the issue the more houses will be invited. It may be recalled that the American Tobacco Company brought out two bond issues, each for \$100,000,000, in April, 1942, the 3s of 1962 and, in October, 1944, the 3s of 1969. In these two issues, the number of houses which participated as members of the buying group was approximately 147. To be exact, there were 146 houses in the 3s of 1962 and 148 houses in the 3s of 1969, which joined together in the assumption of liability for the purchase of each of those issues.

When, in October, 1943, the P. Lorillard Company brought out its 3s of 1963, the amount of the issue was \$20,000,000, and, as might be expected, the number of houses participating was smaller than in the American Tobacco issue because the size of the issue was so much smaller. In this case there were 56 houses in the buying group. Thus, the number of houses will vary according to the size of the issue.

Many factors govern the selection, by the syndicate manager, of the houses to be invited to join in the formation of a purchase group. One is, of course, financial responsibility. It would be unwise to invite into the purchase group any house which did not have adequate capital and,

therefore, which was not strong enough financially to meet its liability. For this reason some houses never participate in the buying of an issue. They are not large enough financially and do not have sufficient capital to warrant an invitation. A second factor that the manager takes into consideration is the ability of the house to distribute securities. The syndicate manager's records show just what each house has done in the past and obviously, in forming a buying group, he seeks to invite those houses which have good distribution records showing that they are able to distribute securities widely and well. The members of the buying group do not participate in the purchase of the issue for the purpose of retaining it; they too are buying it to sell, and the success of the syndicate will depend upon the extent to which they can sell the securities involved. Hence, their ability to distribute the issue is as important as their financial responsibility; however, a few leading houses are valued for their financial strength as underwriters rather than for their distributive ability.

The ability of a house to distribute securities often depends upon the type of security. There are some houses whose customers are interested primarily in railroad securities. Obviously, there would be no advantage in inviting such houses to join in a purchase group if the issue involved is an industrial issue. The fact that they are not invited is no reflection upon them. Rather, it is merely a recognition of the fact that they do not have the market that takes this type of issue. If the issue being distributed were a railroad issue, they would be invited because of their ability to distribute such an issue. Thus, the ability to distribute is influenced not alone by the channels and contacts that the house has within the business, but by the character of the market that it serves as well.

Each member of the purchase group takes what is called a participation, that is, each member agrees to buy a specific part of the issue. It does not necessarily follow that the participation taken by each member of the buying group is identical with that taken by each other member. To refer again to the American Tobacco 3s of 1962, the participations in that issue of \$100,000,000 ranged from \$100,000 to \$5,000,000. The participations in the Lorillard 3s of 1963 ranged from \$100,000 to \$1,800,000. Thus, there was a considerable range in the participation taken by each of the respective members of those buying groups.

THE PURCHASE AGREEMENT

The *purchase agreement* is customarily signed a few days prior to the day on which the registration statement is expected to become effective. Based on this agreement a final amendment is filed with the Securities

and Exchange Commission setting forth the public offering price, the underwriting spread, the price to be paid to the issuer, and the list of the members of the purchase group with the amount of each member's participation. Under the Securities Act of 1933, as amended, amendments to the registration statement may be filed during the 20-day waiting period and, at the discretion of the Commission, any such amendments can be considered as dating back to the date of filing the registration statement. In practice, such questions and suggestions as may be raised by the Securities and Exchange Commission are satisfied by filing an amendment or amendments earlier in the 20-day period so that toward the end of the period the only details missing from the registration statement are those covered by the purchase agreement. Customarily, this final amendment is filed on the day before or on the morning of the twentieth day, and on the afternoon of the twentieth day an order is entered by the Commission declaring the registration statement effective.

Under this agreement, the members of the buying group agree to buy the issue subject to the registration statement becoming effective. This qualification of the agreement to buy is absolutely necessary, for until the registration statement becomes effective, the purchasers cannot publicly offer the security. In other words, the purchasers would own legally unsalable merchandise if, for any reason, the registration statement did not become effective. It may be observed that up to this point there really has been no sale of the securities as such; rather there has been primarily a distribution of the potential liability for the purchase of those securities.

The purchase agreement between the issuer and the group which has agreed to buy the issue contains a number of provisions.

In the first place it will, of course, contain the complete title and amount of the security to be purchased. Second, it will contain representations and warranties by the issuer that a registration statement and prospectus relating to the securities have been properly filed with the Securities and Exchange Commission, that these documents fully comply with the Securities Act of 1933, as amended, and that they do not contain any untrue statements or omit any material facts. Third, it will contain the agreement of the issuer to sell to each of the several purchasers, and the agreement of each of the several purchasers to buy from the issuer, such amounts of the issue as have been determined for each purchaser. The total of the amounts which each purchaser agrees to buy will equal the total amount of the security to be issued. Fourth, it will contain the price which the purchasers will pay the issuer for the security and the price at which they intend to make a public offering. This is sometimes stated another way; namely, that the purchasers agree to buy from the

issuer at the public offering price and the issuer agrees to pay to each of the several purchasers compensation of so much per share or per bond as the case may be. There is also included in this section a statement as to any concessions to dealers which the purchasers intend to offer in connection with the public offering. Fifth, it will contain provisions for payment for the securities and will state the method, the time, and the place at which payment for and delivery of the securities is to be made. In practice, this last operation is normally referred to as the *closing*, and the date on which it takes place is referred to as the *closing date*. Sixth, it will contain an agreement that the obligation of the purchasers to buy the security is subject to certain conditions among which are included (a) the registration statement having become effective; (b) the receipt by the purchasers of legal opinions from both counsel for the issuer and their own counsel as to the legality of the security; (c) the rendering of an opinion by the issuer's independent accountants relating to the financial statements included in the registration statement and prospectus; (d) that the representations and warranties of the corporation are true and correct; and certain other conditions. Seventh, it will contain provisions for the issuer to make available necessary copies of the registration statement and prospectus, and qualify the security for sale under the Blue-Sky laws of various states. Eighth, it will contain provisions for indemnification of the underwriters by the issuer against any liability under the Securities Act arising through no fault of the underwriters and a counter indemnification of the issuer by the underwriters against any liability arising through any incorrect statements made in reliance upon information furnished by the underwriters.

Provisions are also usually included for termination of the agreement in the event of certain happenings relating to the general market for securities, provisions covering possible default by an underwriter, and provisions for postponement of the closing date in the event of certain occurrences.

This purchase agreement is signed by the issuer and the managing underwriter on behalf of the purchase group. The managing underwriter derives his authority so to sign from the purchase group agreement, which will be considered next.

THE PURCHASE GROUP AGREEMENT

This other agreement, called the *purchase group agreement* or the *agreement among underwriters*, is an agreement between the manager and each purchaser, and between each purchaser and every other purchaser of the particular security. It normally incorporates the amount of the

participation of each underwriter by reference to the purchase agreement in which those participations are listed.

It then grants authority to the manager to act on behalf of the purchase group in making offerings for the group to institutions at the public offering price and to selected dealers at, a concession, or discount, from that price, such offerings to be made for the account of each purchaser in the ratio that his participation bears to the total amount of the issue. Usually the percentage of each purchaser's participation which the manager may so offer on his behalf is left to the discretion of the manager, and the remainder of the purchaser's participation is retained by the purchaser for his own sales. Custom of the business has led to the practice of referring to that amount of the participation of a purchaser reserved by the manager for offering to institutions and dealers as the *give-up*, and that amount retained for retail sale by the purchaser as the *take-down*.

In order to facilitate the sale of a large bond issue, it is very helpful if the purchase group can sell a sizable amount of the bonds directly to institutional investors because institutional investors buy, first, in large amounts and, second, the institutional investors buy to hold, thus eliminating any risk of the securities coming back onto the market and disturbing the underwriting and successful distribution of the issue. For example, in the \$100,000,000 issue of American Tobacco 3s of 1962, approximately \$30,000,000 to \$40,000,000 was sold directly to institutional investors by the manager.

The purchase group agreement provides for the mechanics of payment and delivery, payment sometimes being made by each purchaser for the amount of his participation direct to the issuer and sometimes by each purchaser to the manager who in turn makes payment to the issuer for the entire issue. Further provisions are included to cover action to be taken in the case of default by any purchaser. The agreement specifies the amount of the management fee, which each purchaser agrees to pay to the manager as compensation for his services, and which compensates him for his work in originating the issue and handling all the many details of the public offering.

Another important provision in this agreement grants to the manager authority to make purchases and sales for the account of the group in order to stabilize the market for the issue during the offering period, and to file with the Securities and Exchange Commission, on behalf of the group, any and all reports required by its rules covering any such purchases or sales which may be made.

Other matters covered in the purchase agreement include a termination date for the offering and provision for its earlier termination or extension,

provision for the observance by each member of the purchase group of any and all terms contained in the offering to dealers, provisions for indemnification of each purchaser by every other purchaser, and representations and warranties relating to the registration statement and prospectus.

PRICING THE ISSUE

Returning to the purchase agreement, an important point covered in that agreement is the pricing of the issue. The price which the buying group will pay to the issuer depends upon two things: first, it depends upon the public offering price at which it is deemed possible to distribute the security; and, second, it depends upon the underwriting spread.

Obviously, the underwriters cannot afford to pay to the issuer a price which is so close to the public offering price as to leave too narrow a margin of profit in relation to the risk and the service performed. If, for example, a public offering price was 101, then certainly the underwriters could not pay to the issuer 101. The price paid to the issuer would have to be less than that in an amount that will provide an adequate margin or underwriting spread. Therefore, first let us consider the price to the public and then let us give some consideration to the underwriting spread, since the two of them affect the price which the group can afford to pay to the issuer.

The success or failure of the underwriting will depend very largely upon the selection of the public offering price. If the public offering price is too high, the issue will be difficult, if not impossible, to sell. On the other hand, if the public offering price is too low, then the issuer will be dissatisfied with the underwriters because he will feel that he could have obtained a better price for his issue than that agreed upon. The public offering price, therefore, is most important. The question is upon what basis is the public offering price selected?

The public offering price is selected on the basis of the appropriate price at which the securities can be sold in the current market. To determine that price, the underwriters generally take the price at which other comparable securities are then selling and use that price as a basis for setting the public offering price for their particular issue.

To make a thorough study of pricing, a statistical comparison must be prepared which should clearly present a number of factors for comparative consideration. For this comparison an effort is made to pick out ten to twenty companies whose business is similar in nature to that of the issuer and which have securities outstanding of the same type as the proposed issue. Obviously, if the security to be priced is an issue of debenture or mortgage bonds, it is necessary to use for comparative

purposes only such other companies as have bonds outstanding, rather than those that may have an all stock capital structure. When suitable companies have been selected, the balance sheet and income account of each must be carefully scrutinized so that any unusual or nonrecurring items can be clearly indicated. Next the comparison must be set up in tabular form so that balance sheet factors, income factors, and asset and income ratios of various kinds can be readily weighed against the prices at which the securities of each company are currently selling.

Then the various factors and ratios of the issuer, set up on a pro forma basis to give effect to issuance of the proposed security, are carefully compared with those of the other companies and the underwriters endeavor to estimate the price at which the proposed security would be selling if it were then outstanding, weighing the statistical factors and ratios against current market prices of other securities. Customarily the offering price is then determined by setting it fractionally below the price arrived at by the above estimate in order to give due weight to the amount of the issue to be offered and to endeavor to insure successful distribution.

THE SPREAD

The underwriting spread represents the compensation paid to the underwriters for the functions which they perform. In the first place, it represents compensation to them for the risk that they assume in buying the issue. In the second place, the underwriting spread represents compensation to them for their services in preparing the issue for the market—a process which requires a great deal of effort. In the third place, the underwriting spread represents the compensation for their services in the distribution of the issue, and also represents the compensation for the actual out-of-pocket expenses that the underwriters must incur in the underwriting.

In the \$20,000,000 Lorillard issue, referred to heretofore, the public offering price was $101\frac{3}{4}$. The underwriters bought the issue at par. That meant, therefore, that they had a $1\frac{3}{4}$ per cent spread or \$17.50 per \$1,000 bond as the underwriting spread to cover expenses and profit.

The underwriting spread really may be divided into three parts. It includes, in the first place, what is called a management fee which usually runs from $\frac{1}{8}$ to $\frac{1}{2}$ of 1 per cent. It also includes underwriting compensation and selling commission, the former representing the compensation for the risk assumed and the latter, compensation for the sales effort.

FORMATION OF THE SELLING GROUP

It will be noted that up to this point we have dealt mainly with the distribution of liability or risk. In a way, a preliminary step has been

taken toward the distribution of the securities because the buying group will include houses selected in part upon the basis of their ability to distribute the issue directly or indirectly. Basically, however, the job accomplished up to this point has been a distribution of liability. The distribution of securities will come, of course, with the formation of the selling group and the public offering.

The formation of the selling group is primarily for the purpose of distributing the securities; more particularly, to distribute the securities that were given up by the participants in the buying group. The selling group consists of dealers all over the country who are permitted to purchase, from the underwriters, relatively small participations in a new issue at an established discount from the public offering price for resale to the public at the public offering price. In this sense the purchase group members function as wholesalers of new securities, and the selling group members as retailers. The number of houses that participate as members of the selling group, of course, varies from one issue to the other and will depend in large part upon the size of the issue. The issue of \$100,000,000 American Tobacco 3s of 1962 was sold through a selling group comprised of approximately 600 houses, and the issue of \$100,000,000 American Tobacco 3s of 1969 through a selling group made up of approximately 400 houses. It may be seen, therefore, that some of the selling groups will be extremely large, and naturally, the group was large in this case because of the size of the issue.

The selling group plays a very important part in relation to the buying group because the selling group aids in the rapid distribution of the issue. Obviously the more rapidly the issue is distributed and sold, the shorter is the period of time during which the purchase group faces a risk of loss. Likewise, the more rapidly the securities are distributed, the sooner the capital of the buying group is freed from the issue and therefore made available for participations in other issues.

Another factor that makes a speedy distribution of an issue desirable is that the corporation whose securities are being distributed naturally looks with more favor upon a quick sale of its securities than if it were to take considerable time to sell those securities. Hence, the rapid and effective distribution of an issue by the underwriters reflects favorably upon their ability, and thereby satisfies their customer, the issuer.

In forming the selling group, under the Securities Act of 1933, the syndicate manager cannot offer these securities for sale to the prospective members of the selling group before the effective date of the registration. However, he may take certain preliminary steps toward the formation of the selling group.

The syndicate manager usually sends out to prospective members of

the selling group a letter stating that a registration statement has been filed on the issue, and accompanied by what is called a red-herring prospectus. This red-herring prospectus is in the nature of a preliminary prospectus and it is furnished by the syndicate manager to the dealers who may be invited to join in the selling group. It is so called because there is printed in red on the left hand border of each page a statement which says:

A registration statement relating to the securities referred to herein has been filed with the Securities and Exchange Commission, but has not yet become effective. Information contained herein is for informative purposes only, and is subject to correction and change without notice. Under no circumstances is it to be considered a prospectus, or as an offer to sell, or the solicitation of an offer to buy the securities referred to herein. No offer to buy or sell any such securities should be made and no order to purchase the securities herein referred to will be accepted unless and until a registration statement under the Federal Securities Act of 1933 relating to the securities herein referred to has become effective.

This preliminary prospectus differs from the final or definitive prospectus in three important respects. It does not mention the price at which the securities will be offered to the public, it does not indicate the concession which will be given to members of the selling group, nor does it show the price to be paid to the issuer. In addition, however, it may contain other omissions and may later be changed in certain respects. As has been noted, these prices and the concession to dealers are not finally determined until a day or so before the registration statement becomes effective, at which time they are added to the registration statement by amendment.

It should be noted here that since the passage of the Securities Act the whole question as to distribution of red-herring prospectuses remained in a somewhat confused state and many discussions took place between the investment banking industry and the Securities and Exchange Commission seeking to clarify just what could and could not be done under the Securities Act and the rules and regulations of the Commission.

On December 5, 1946, the Commission announced the adoption of a new rule to be effective for a trial period of six months to facilitate the dissemination of information in registration statements prior to their effective date. This rule provides that sending or giving to any person before a registration statement becomes effective a copy of the proposed form of prospectus shall not constitute a violation of the section of the Act prohibiting offering a security in advance of the effective date. The rule further stipulates that a prospectus so distributed must contain substantially the information to be included in the final prospectus except that there may be omitted information dealing with the offering price,

underwriting discounts, call prices, conversion price, if any, and any other similar matters which are dependent upon the offering price.

THE SELLING GROUP AGREEMENT

The *selling group agreement* or *offering to selected dealers* customarily is sent out by the manager, when the registration statement has become effective, to a fairly large group of dealers located in various sections of the country, the number of dealers to whom such offering is made being based on the amount of the given security available for selling group distribution. A prospectus in final form must accompany the selling group letter.

The selling group agreement sets forth all of the provisions relating to the public offering and among other things includes:

1. The fact that the offer is being made by the manager on behalf of the purchase group.
2. The public offering price.
3. The concession to selected dealers and any reallowance which they are permitted to make to other dealers not included in the selling group.
4. The firm offering of a given amount of the security or the statement that the securities are being offered for subscription subject to prior sale.
5. An outline of the mechanics of replying to the letter by the dealer and confirmation of the dealer's request by the manager.
6. A statement to the effect that a registration statement relating to the issue has become effective and that no one is authorized to use any information other than contained in the prospectus in offering the issue.
7. A statement as to how and where the selling group dealer is to pay for the securities purchased by him.
8. A statement referring to the termination of the agreement.
9. A provision giving authority to the manager to take any action necessary in relation to the offering and limiting the liability of the purchase group in connection with the offering.

In some instances the selling group agreements repeat the stabilization provisions set forth in the agreement among purchasers and also provide for withholding the selling group concession, or for redelivery to the selling group member of any securities purchased by the manager in the stabilizing process which have not been effectively placed for investment by the selling group member. If the issue is to be offered on a subscription basis, this agreement will contain provisions covering the opening of the books for subscriptions and the authority of the manager to close these books at his discretion. The length of time the subscription books

will be open will depend entirely upon the issue itself and the general public reception.

It may be recalled that, in May, 1944, when the Virginia Electric and Power Company brought out its 3s of 1974, a \$23,000,000 issue, the books were closed before noon, and, even more speedily than that, it may be recalled that, in July, 1945, when the American Telephone & Telegraph Company brought out its \$175,000,000 2¾s of 1980, the books were closed within an hour; that is, the issue was oversubscribed. Let us keep in mind, however, that oversubscription does not mean oversubscription by investors. It means oversubscription by the dealers. And when the issue is thus oversubscribed, it of course presents to the syndicate manager the problem of allotting the issue to these subscribers.

PRICE STABILIZATION

The matter of price stabilization or market support during the offering period is something with which the SEC has been greatly concerned. For a time it was feared by some that the SEC viewed this market support as a form of price manipulation and contrary to federal law. Thus, at the outset, under the Securities Act of 1933, many of the underwriting groups hesitated to insert any clause in the selling group agreement with respect to market support because they feared they would be cited as fixing prices. The attitude of the SEC was soon clarified and market support was recognized to be an essential part of the marketing of any new issue.

However, the SEC sought to control such market support by the adoption of two important rules. Before taking up the contents of these rules, it will be interesting to see what the objectives were that the SEC had in mind when it adopted them.

It had three objectives. In the first place, it wanted to acquire data on stabilization activities. In the second place, it wanted to restrain any price manipulation in violation of the law. And finally, it of course wished to afford adequate protection to the investor.

Two rules were adopted by the SEC. The first rule required that any intention to support the market during the offering period must be stated in the prospectus. That is why one finds in the prospectus this statement:

To facilitate this offer, it is intended to stabilize the price of the securities to which this prospectus relates. This statement is not an assurance that prices of the securities will be stabilized, or that stabilization if commenced may not be discontinued at any time.

The second rule adopted by the Commission provides the methods that may be used to stabilize and requires the underwriters to submit daily reports of their stabilization activities. The SEC plots a chart of these

market activities and compares it with market activities in similar obligations for the purpose of determining whether there is any undue manipulation in violation of the law or operations against the best interests of the investor.

In some instances it is found that at the termination of the syndicate, when the market support is withdrawn, the price of the issue tends to fall off. In August, 1943, \$45,000,000 Northern Indiana Public Service 3 $\frac{1}{8}$ s of 1973 were offered at 102 $\frac{7}{8}$ s. When the group terminated, the market support was withdrawn, and the bonds declined to 101 $\frac{5}{8}$ s. The Louisiana Power and Light 3s of 1974 were offered in April, 1944, at 103. At the termination they were quoted at 101 $\frac{3}{4}$ bid and 101 $\frac{5}{8}$ asked.

All issues are not successfully marketed. Some issues are overpriced and it is impossible to market them successfully. Of course, in those instances, it is generally necessary to terminate the syndicate. The participants in the buying group take up their proportionate part, and whether or not they are able to get out of it without a loss depends upon the price at which they can ultimately dispose of the obligation in the open market.

REVIEW QUESTIONS

1. What factors are usually analyzed in a preliminary investigation of industrial corporations by an investment banking house before it decides to finance the corporation?

2. Upon what matters must the banker and the corporation agree prior to registration?

3. What documents must be prepared prior to the public offering?

4. Why does the originator invite other houses to join with it in the purchase of the security to be issued?

5. What factors govern the selection of the houses to be invited to join in the formation of a purchasing group?

6. What provisions are usually included in the purchase agreement between the issuer and a group which is to buy the issue?

7. How is the public offering price of an issue determined?

8. For the performance of what functions are underwriters compensated by the underwriting spread?

9. What factors make the speedy distribution of an issue highly desirable?

10. What is a "selling group" and how is it formed?

11. What information is usually contained in the "selling group agreement" or "offering to selected dealers"?

12. What were the objectives of the SEC that led to the control of price stabilization activities?

13. What are two principal rules adopted by the SEC to control price stabilization activities?

COMPETITIVE BIDDING IN THE ORIGINATION OF SECURITIES

by Franklin T. McClintock, *Vice President, Harriman
Ripley & Company, Incorporated*

THE SUBJECT of competitive bidding is a very controversial subject, and it is one on which almost everyone concerned with investment banking has taken a position for or against. The student is referred to two documents that in some respects discuss the subject more thoroughly than will be possible within the limits of this chapter. In December, 1940, the Public Utilities Division of the Securities and Exchange Commission published a report which was called *The Problem of Maintaining Arms' Length Bargaining and Competitive Conditions in the Sale and Distribution of Securities of Registered Public Utility Holding Companies and Their Subsidiaries*. That document states the case for competitive bidding perhaps as well as it has ever been stated. On the other side of the question, in January, 1941, the Investment Bankers Association of America published a rebuttal called *An Examination of the Proposal of the SEC Staff for Compulsory Competitive Bidding in the Sale of Certain Public Utility Securities*.

Investment banking has been subjected to close public scrutiny at various times over a long period. The Pujo investigation of 1913, the Pecora investigation of 1932, and the Temporary National Economic Committee investigation of 1939 were outstanding examples of public inquiry into the methods under which investment banking in this country is conducted. An enormous record has been built up for study.

In general, each of these investigations was pointed at specific evils, already suspected or imagined, for which a cure was sought. In some cases the investigations may not have been entirely impartial, but they at least set forth a large body of data for public view. The Securities Act of 1933 and the Securities Exchange Act of 1934 followed the Pecora investigation of 1932. Competitive bidding for corporate securities is in large measure the result of the TNEC investigation of 1939. Somewhat earlier, Mr. Justice Douglas had laid the groundwork for the TNEC investigation in various speeches delivered while he was a member or chairman of the Securities and Exchange Commission.

THE MONOPOLY QUESTION

The TNEC investigation was called an *Investigation of Concentration of Economic Power*. The presentation of evidence at the hearings on investment banking was prepared by the Investment Banking Section of the Securities and Exchange Commission, which relied in general on the case method of presenting its case. The nub of the matter, however, was presented by the final witness for the Commission who introduced certain statistics which showed that there was a monopoly in investment banking.

In substance, the statistics introduced in evidence by this witness indicated that 6 firms in New York City had managed the origination and distribution of about 57 per cent of the dollar amount of all bond, preferred stock, and common stock issues registered under the Securities Act of 1933 during the 5½ year period ended June 30, 1939. In addition, 14 other firms in New York City had managed over 21 per cent of the dollar amount of such issues, making a total of almost 79 per cent of these issues managed by 20 firms in New York City. An additional 12 per cent had been managed by 18 firms outside New York City. Thus, over 90 per cent of the total *registered* financing during the period was said to have been managed by only 38 firms, and all other firms in the business managed only 9 per cent of the available business. Reference is made here to management and not to underwriting participation, a distinction which all will appreciate.

It is clear beyond any doubt that a belief that there is a monopoly in investment banking has been at the bottom of the demand for competitive bidding for securities.

In 1937, Mr. Justice Douglas, then an SEC commissioner, made a speech in which he called for competitive bidding "where the bankers are dispensing to themselves the patronage of a monopoly, whether by reason of directorships, voting trusteeships, strategic investment positions, or otherwise." Subsequently, the so-called affiliate rule of the SEC—Rule U-12F-2—promulgated late in 1938, required competitive bidding in cases where underwriters of certain utility issues, deemed to have an affiliated relationship with the issuer, received fees in excess of 5 per cent of the total fees paid in connection with the transaction.

This rule proved unworkable and was supplanted by Rule U-50 as of June 1, 1941, requiring competitive bidding for public utility securities issued under the jurisdiction of the commission. In referring to Rule U-50 and competitive bidding under that rule in the course of this discussion, the reference is only to securities of public utility companies subject to the jurisdiction of the SEC.

Promulgation of Rule U-50 was preceded by a large volume of comment pro and con. One of the leading proponents of competitive bidding issued a pamphlet in 1940 which began: "The paramount issue involved in the controversy over competitive bidding for new issues of securities of regulated corporations is simple and straightforward. Is the continued concentration of a major part of such securities underwriting in the hands of a few investment banking houses advisable in a democracy?" The pamphlet went on and vigorously denied that it was advisable. The staff of the Public Utilities Division of the SEC issued a report in December, 1940, in which it recommended that the commission adopt a competitive bidding rule for the securities of holding companies and their subsidiaries under the jurisdiction of the commission. This report stated that the "main case for competitive bidding" rested on the "element of concentration in and the noncompetitive aspects of the security underwriting business." Again, when the ICC called for briefs on the subject of competitive bidding in 1944, the proponents of competitive bidding brought forth the existence of a monopoly in securities underwriting as their principal argument in favor of competitive bidding. The ICC decided to require competitive bidding for railroad securities with effect from July 1, 1944.

No attempt will be made in this discussion to disprove the existence of a monopoly in investment banking. The subject is too complicated to go into at this time. It may be strongly asserted, however, that there is substantial evidence that such a monopoly does not exist. It is sufficient for the purposes of this discussion simply to recognize the fact that the monopoly question is the basic question in the controversy over competitive bidding.

There are, however, many other phases of competitive bidding which have been discussed, pro and con, by those interested in the subject. While these other phases have a distinct bearing on the adequacy of competitive bidding as an instrument for effecting the purchase and sale of new issues of securities, they are not sufficient in themselves to establish a case for or against competitive bidding in the absence of a final determination of the monopoly question.

It might also be said, at this point, that regulatory bodies (such as the SEC under the Public Utility Holding Company Act) which have a positive, statutory duty to find that the terms and conditions of the sale of securities are in the public interest or in the interest of investors or consumers, or that fees and commissions are reasonable, are likely to look upon competitive bidding as a mechanism to solve this statutory problem.

The staff of the Public Utility Division of the SEC has called competitive bidding an *automatic mechanism* for fulfilling this statutory duty.

PAST HISTORY OF COMPETITIVE BIDDING

Competitive bidding has been used in the sale of municipal securities for a great many years. It was primarily adopted to prevent collusive practices between certain types of municipal dealers and politicians. The employment of bona fide competitive bidding undoubtedly eliminated such practices.

In 1919, the commonwealth of Massachusetts enacted a law requiring gas and electric companies to sell bond issues through competitive bidding. Since 1926, the Interstate Commerce Commission has required competitive bidding for equipment trust issues of railroads. The Indiana Public Service Commission has at various times in the past required certain public utility companies to sell securities through competitive bidding. In 1935, both the New Hampshire Public Service Commission and the District of Columbia Public Utilities Commission adopted orders requiring competitive bidding. In 1939, the Federal Power Commission adopted a competitive bidding regulation covering the few companies under its jurisdiction with respect to the issuance of securities. The Federal Power Commission has wide jurisdiction over accounting and other activities of utilities, but its jurisdiction over security issuance is very limited.

As previously pointed out, the first extension of competitive bidding to a very wide field occurred in 1941, when the Securities and Exchange Commission adopted Rule U-50. In 1944, when the ICC adopted its competitive bidding rule, the field was extended to virtually all railroad securities. More recently, the California Railroad Commission and the Public Service Commission of the state of New York have required competitive bidding for companies under their jurisdiction, some of which are not under the SEC or any other regulatory body. Certain telephone companies and electric and gas companies that are not under any jurisdiction requiring competitive bidding have, nevertheless, called for competitive bids recently on issues sold by them.

As a result of these developments, approximately one half of the total corporate and foreign securities sold through underwriters in the United States are now sold through the procedure of competitive bidding. Clearly, the introduction of competitive bidding into corporate financing on a wide scale has necessitated substantial adjustments in the methods of conducting investment banking, and accordingly, the past five and one-half years have been a period of great change in the underwriting business.

EXAMPLE OF DIRECT NEGOTIATION

Before describing underwriting procedure under competitive bidding, it will be interesting to consider a case of direct negotiation which may be used for comparative purposes.

A well-known tire and rubber company, which has for a number of years been advised by my company on matters relating to its capital structure, had a difficult problem in finance in the spring of 1938. The company had approximately \$10,000,000 in long-term debt and about \$40,000,000 in short-term bank loans. The bonds, which were due in 1942 and 1948, had been issued in the 1920's and were 5 per cent bonds. The bank debt had been incurred largely within the preceding 12 months owing to increases in accounts receivable and in inventories occasioned by a larger volume of business, higher raw material prices, and working capital requirements for newly acquired or constructed plants and an increased number of auto supply and service stores. The company needed \$50,000,000 to fund its bank loans and refund its bonds.

General business conditions in 1938 were bad. The tire and rubber industry had, for years, been poorly regarded by the market, primarily because it grew or bought its crude rubber in the Far East. Inventories of rubber were large because of the long period required to get the rubber from the source of supply to plants in this country. The price of rubber is a world price and frequently fluctuates over very wide limits. At certain times, such as in 1920 and 1930, the price of rubber dropped precipitately. In 1920 some of the rubber companies had got into trouble owing to fluctuations in rubber. Also, some of them had got into trouble in the early 1930's. The company with which we were dealing came through these crises in satisfactory shape, maintaining its preferred dividend payments throughout the 1930's; but no company in the industry was then considered as a high-grade risk.

To offer a bond issue of a rubber company in 1938 thus presented difficult problems. Goodrich had brought out an issue of 4¼ per cent twenty-year bonds in 1938. In the spring of 1938, that issue was selling at a discount to yield approximately 4.45 per cent. The Goodrich issue had not been particularly acceptable for insurance company investment. It was rated only *Baa*. The United States Rubber Company had effected a private placement of a twenty-year issue in 1938 on a 4.25 per cent basis with insurance companies.

The problem was viewed as a problem of drawing up a security which would prove acceptable to the insurance companies and other institutional investors on a basis which would be attractive to the issuing company. It was felt that an *A* rating from the statistical services was required in order to offer the bonds on an attractive basis. Several months' work was

devoted to this problem. Indenture provisions were drawn and studies made regarding the best type of issue to bring to the market.

It was finally decided that the issue should be a 10-year issue. At that time the commercial banks were active in the bond market and such a maturity would attract a considerable amount of bank buying, which, taken together with interest on the part of insurance companies and other institutions to be attracted through the design of the indenture provisions, should be sufficient to place the entire issue. A negative pledge clause was designed for the indenture which differed substantially from the customary negative pledge clause. It was designed for the particular situation surrounding the company. A dividend covenant was included, at a time when dividend covenants were not as customary as they are currently, which was substantially in the form that most dividend covenants are drawn today. There were restrictions on the issuance of additional debt which went a little further in some respects than in a number of other issues that were being brought out at that time. There was to be a sinking fund based upon a combination of earnings and fixed contributions. The fixed sinking fund would retire a substantial portion of the issue on a definite schedule, but would be relatively easy to meet. The earnings feature would retire a substantial amount in good times and a smaller amount when and if earnings fell off.

These provisions were adequate to get an *A* rating, and in October of that year it was possible to offer $3\frac{1}{2}$ per cent bonds on about a 3.54 per cent basis. Institutional investors, including insurance companies, banks, and others, were very much interested in buying the issue. The over-all spread was $2\frac{1}{2}$ per cent, which was in line with spreads then prevailing. Of that spread, 1 per cent was given to dealers distributing the bonds. Approximately 27 per cent of the bonds were sold by 510 selling group members, about 14 per cent by the managers directly to institutions as group sales for the account of the underwriters, and approximately 59 per cent by the 86 underwriters at retail. The 27 per cent sold to the selling group was perhaps a smaller percentage than was generally the case at that time. Anywhere from 25 to 70 per cent might, at that time, be sold through the selling group rather than directly at retail by the underwriters. This issue of bonds was refunded later on, in May, 1941, with an issue of twenty-year 3s.

COMPETITIVE BIDDING IN PRACTICE

Under competitive bidding, issuers do not have the same access to bankers for advice that they have in direct negotiation. It is true that issuers sometimes talk in advance to the managers of the various groups who are to bid for their securities in an effort to obtain opinions on

certain features of the forthcoming issues. This does not infer that the issuer asks the banker to sit down and make a detailed study of the provisions of issue, but if there is any doubt in the issuer's mind about a given provision he may ask a banker to make suggestions. In answering such an inquiry, it is usually necessary to give a judgment which is to some extent a snap judgment, since the underwriting firms simply cannot afford, under competitive bidding procedure, to make the detailed studies that would be necessary to give a considered judgment on every problem that might arise.

To compensate for this lack of professional advice, some utility companies have employed investment bankers as financial advisors on a fee basis, to sit with them during the preparation of all documents and advise them on details that require consideration. Recently, the SEC has taken the position that a financial adviser may know more about the company than those not in such a position, and that a financial adviser should not, therefore, be permitted to bid on an issue because he may have a competitive advantage. Of course, it has long been an established point of view that one of the protections to investors was the familiarity of underwriters with facts concerning the companies whose securities they underwrote.

In the utility field, such lack of advice, as far as indenture provisions are concerned, has not made a great deal of difference because utility indentures are now pretty well standardized. On the other hand, lack of advice on the timing of issues has, in a number of cases, been detrimental to the issuers. There have been several cases where the issuer, thinking that he could get a certain price for his issue, put limits on the bid, and as a result did not receive any bids at all. The New York State Electric and Gas Corporation, in June, 1941, advertised for bids for a preferred stock issue, setting a limit which was not, as it turned out, in line with the market, and they received no bids. Public Service Company of Indiana, Inc., in December of 1941 did the same thing on a bond issue, and Atlantic City Electric Company, in 1942, failed to receive bids for a preferred stock issue. In other cases, while bids were received, the timing of offerings has not been good.

The procedure of competitive bidding requires a wait between the advertisement for bids and the actual submission of bids. This procedure lacks flexibility. For example, bond issues of the Consolidated Gas, Electric Light and Power Company of Baltimore and The United States Rubber Company were both scheduled for offering in April, 1946. On the day of bidding for the Consolidated Gas bonds, the government market sold off badly, and all three of the competing groups found it necessary to readjust their bids downward that morning, that is, to make a sub-

stantial reduction in the prices they had in mind a few days earlier. In contrast, the United States Rubber financing was postponed until the government market had leveled out, when, the company and the underwriters being able to decide overnight that market conditions were good enough to bring the issue out, it was possible to do so very successfully. Consolidated Gas of Baltimore, however, was disappointed at the bid they received at the time that United States Rubber was able to postpone its offering.

SIZE AND NUMBER OF ACCOUNTS

During the first four and one-half years Rule U-50 was in effect; that is, through December 31, 1945, 50 investment banking firms took the leadership in forming accounts under their management to bid for securities sold under the rule. These figures were taken from the official list of the SEC.

The number of accounts formed to bid on any one issue depends on a large number of factors. These factors include the size of the issue in relation to the underwriting ability of the firms which are potential members of the account; the quality of the issue; whether it is a bond, preferred stock or common stock; and, finally, whether the underwriters are free to reoffer the securities immediately after the effective date of the registration statement, or whether a standby period is involved during which security holders of the company have the right to buy or exchange.

As to bonds, there may be 14 or 15 accounts formed on very small issues of less than \$5,000,000 in principal amount. This is particularly the case with small high-grade bond issues which have a very broad market. The number of accounts formed gradually decreases as the size of the issue increases. There might be anywhere from 4 to 10 accounts for an issue of \$10,000,000. The number would narrow to 2 to 4 with an issue of \$25,000,000, and there are seldom more than 2 accounts when the amount of an issue exceeds \$50,000,000. In the case of very large issues—that is, \$150,000,000 or thereabouts—it is sometimes difficult to form 2 separate groups.

As to preferred stocks, the number of accounts for an issue of a given size is generally smaller than would be the case with bond issues of similar size. In the case of common stocks, because of the greater risk in the underwriting, there are generally even fewer bids than for a preferred stock issue. This is due to the fact that, as risks increase, members of the account are content with smaller participations. Thus, there may be more members in each account and the number of accounts is correspondingly smaller. Moreover, certain investment bankers do not bid for stock issues.

FORMING ACCOUNTS

Investment bankers who have previously handled the securities of a company through direct negotiation generally like to form accounts to bid for the issues of such company now required to be sold through competitive bidding. They usually invite the firms which had previously been associated with them in underwritings for the company to join them in the competitive account, and they sometimes also invite other firms to go along, depending on the size of the issue and a number of other factors. Competing accounts are formed by other firms, and there is naturally considerable rivalry in this respect.

Accounts are usually formed when information is first received that prospective financing is planned for the particular company. Sometimes the exact amount and the timing of the financing are not known when the accounts are formed. There is considerable advantage in being the first in the field in forming an account in order to have the pick of the field in securing firms with adequate underwriting and distributing ability. There is a factor of considerable difference in the quality of accounts formed. There are weak accounts and there are strong accounts. The objective always is to form a strong account, although that objective is not always achieved.

A well-balanced competitive account is one which has sufficient underwriting resources to carry an issue which might move slowly into the hands of investors, plus sufficient distributing ability to handle the distribution of the issue. Generally, where an issue is slow in moving out, certain participants in the group sell more than their underwriting participations, or at least more than the amount of the issue reserved by them for retail distribution, while other underwriters sell considerably less than their retained securities. Nevertheless, the participants who do not sell all of their retained securities may be very valuable in the account because they are good as underwriters, whereas some of the firms with excellent distributing ability are rather nervous as underwriters. Good geographical representation is also considered requisite in a competitive account, with emphasis on regions in which the security is expected to have a particularly good reception. Usually, but not always, this is the home state of the issuer.

When a competitive account is formed by one or more managing firms, it is customary to send out a letter stating that the account has been formed and asking the participant to confirm in writing, on a duplicate copy of the letter, that he is a member of the account. More frequently than not the amounts of the participations of the members of the account are not determined at the time this letter goes out.

PARTICIPATIONS

When details as to the amount of an issue are finally settled, the participations of the members of the account can be fixed. There are about 20 underwriting firms in the business which have sufficient capital resources and sufficient interest in underwriting to take top amounts in all issues. These firms are called *majors*. These are the firms that head most of the competitive accounts that are formed. Very few of them, however, attempt to form accounts under their own management for all issues offered for bids, simply because they do not have the manpower to do so. Moreover, if they tried, they would not be able to get a following because there are not enough underwriting firms to form twenty competing accounts on any except the smallest issues.

On negotiated issues, the managing underwriter generally takes the largest participation in the issue, and the associates take smaller participations, the size of which depends generally on the capital and relative standing of the firm and on a number of other factors. In a competitive account, a firm which considers itself a major usually insists on an initial participation equal to the participation of the manager and to the largest participation of any other member of the account.

There is a second group of underwriting firms which are not always prepared to make the stipulation that they must have an interest equal to the manager and to the largest participation of any other participant. These firms sometimes participate as majors and sometimes in positions just below the majors. There are still other firms who generally rank in participation just below the second group, and so on down the line to the smallest firms, which may take participations of \$50,000 in a bond issue.

The managing underwriter must be very careful to give each member of the account his fair and proper participation. Otherwise, there is dissatisfaction in the account, and the probability of drop-outs. Also, no participant should be given more than he can conveniently handle, because the result might very well be harmful. It is the managing firm or firms which determine participations in accounts within the framework of the customs of the business.

PREPARATION OF DOCUMENTS

When an issue is ready to come out, the issuer prepares the documents that must be used in connection with the offering. These documents usually include the registration statement; the prospectus; the indenture, if it is a bond issue; amendments to the articles of incorporation, if it is a stock issue; the bidding form; statement of terms and conditions of the bidding; the purchase contract; applications to regulatory bodies; and a number of other documents.

The underwriters are required, under the Securities Act of 1933, to study these documents. For the protection of the underwriters, the issuer appoints independent counsel to represent the underwriters in the preparation of the documents. There are a number of firms in New York, Chicago, Boston, Philadelphia, and elsewhere who act as independent counsel for the underwriters. This counsel is, however, chosen by the issuer. He is paid by the successful bidder. He participates in the preparation of the documents, gives the successful bidder or bidders an opinion at the closing concerning the legality of the issuance of the securities and other matters, and acts as counsel for the successful group on all matters requiring legal advice.

When the documents are prepared, the issuer makes them available in preliminary form to the managers of the groups which have been previously formed to bid on the securities. Each underwriter subjects these documents to study, as he would in the case of a negotiated issue. In addition, the manager may make additional studies. He may make an examination of the property. He may hold discussions with the officials of the company in order to get as much background as he can—particularly sales material for use with his group. He does that independently of the other groups in order, if possible, to develop information that the other groups do not have. That is more true of common stock issues and some preferred stock issues than of bond issues which, to a large extent, are purely dependent upon the money market.

Shortly before the registration statement becomes effective, or shortly before the bids are to be received, the issuer holds a meeting which gives the underwriters the opportunity to ask questions about the company, which are answered by its officials. The competing underwriters all meet together. At these meetings the issuer frequently points out the strongest features of his company in order to stimulate interest among the competing groups.

STATEMENT OF TERMS AND CONDITIONS

The issuer publishes a public invitation for bids in which is contained a statement of the terms and conditions of the offering. Typically, the first section lists the documents which are available concerning the company and states where they can be obtained. The second section concerns the form of questionnaire which must be filled out by each underwriter or prospective underwriter in each group. This is for the purpose of completing the information in the registration statement relating to the underwriters, in the event that that group is the successful bidder. The third section deals with the form and contents of the proposals and sets forth limitations on the bids. Limitations may apply to coupon or

dividend rates as well as to price. In addition, there is a section which sets forth the method of determining the winning bid. It is now generally customary to state, on a bond issue, that the winning bid will be the bid requiring the lowest annual cost of money. In other words, the high bid is necessarily the winning bid. Originally, as a protection for investors, the SEC said that the high bid did not necessarily have to be the winning bid. If there was a ridiculously high bid, they reserved the right to reject it. Under the procedure, as it is now set up, a ridiculously high bid would be accepted or all bids would be rejected, and a new invitation for bids issued at a later date.

The statement of terms also refers to the purchase contract, which is the contract entered into by the successful bidder when he purchases the issue. It is a lengthy and technical document. It gives all the conditions of the purchase and the warranties of the issuing company, together with the terms of indemnification if subsequently the registration statement proves to have been deficient. It sometimes outlines the conditions under which the agreement might be terminated without a purchase prior to the closing. It also gives the details of the closing at which the securities are delivered to the purchasers upon payment of the stipulated sums.

AGREEMENT AMONG PROSPECTIVE PURCHASERS

The agreement among prospective purchasers is the form of agreement which the underwriters who join a group enter into prior to the submission of bids. It is generally signed several days in advance of the submission of the bid, and it governs the operation of the group, as such, prior to the submission of the bid, in determining the bid, and in making the public offering in the event that the group is the successful bidder.

While there are technical differences among the types of agreements used by various managing underwriters, they accomplish much the same result and the differences seldom are of basic importance.

In a typical agreement, Section 2A lists the members of the group as constituted at the time the agreement is signed. Sections 2B, 2C, 2D, and 2E cover the withdrawal or exclusion of members of the group in the event that a member is unwilling to go along with the group at the price the group is willing to bid. Generally speaking, most agreements provide that the basic participation, as set forth in the agreement, can be increased by 10 per cent without any further agreement from the participant. If the participation of a participant is increased or decreased by more than 10 per cent, it is necessary to obtain his separate consent.

Generally, the agreement sets forth the mechanics for arriving at a bid, indicating the number of meetings to be held and who is to be present at those meetings. Another section sets forth the general mechanics under

which the public offering is to be made in the event that the group is the successful bidder. There is still another section of great importance on stabilization. The agreement states the method for determining the fee, if any, to be received by the manager for handling the details of the issue in the event the group is the successful bidder. Also, the agreement covers payment of expenses of the group in the event that the bid is unsuccessful or successful. The document is rather lengthy because it is intended to cover most of the contingencies which might arise.

DETERMINING THE BID

In determining the bid, most group managers now follow much the same procedure. The manager makes a more thorough study of the security than most of the others, with a view to determine as well as he can in advance where the security will be sold. In doing so, he consults dealers in various parts of the country as to their estimate of the demand for the security in that region. He talks to a number of institutional investors. He obviously does not solicit orders from those investors, but he does attempt to determine the probable institutional demand for the issue.

The members of an account, at least all the majors of an account and most of the others except some of the very smallest participants, hold individual meetings to discuss the issue among their partners and officers. Each house arrives at its own price view, and that view is taken by a representative to a preliminary group price meeting of the members of the account where there is a general discussion of the price at which the issue should be offered. The manager generally gives his ideas as to the probable demand for the issue. In the preliminary meetings there is usually a fairly wide difference of opinion. It is exceptional to have everyone in agreement as to the proper bid at this point.

In some cases, however, there is an obvious price. If there is a direct comparison in the market with another issue, it is fairly certain that the issue cannot be sold successfully above that price. In that case, the tendency is to bid a small spread off of the obvious price, and the bidding is really on spread rather than on price. In some cases, while there is an apparently obvious price comparison, the opinion may be that it will be possible to sell the issue at a higher price. In such an instance, a larger spread is usually desired, depending on how firm one is in the belief that the security can be sold at the higher price. In still other cases, all the members of the group, or most of them, are wrong. They think that an issue can be sold at a given price. That price may actually be too high or too low, but they insist on a certain price, with either a small or a large spread as the case may be, which turns out in the actual result to be

wrong. Generally, at the preliminary price meeting, an attempt is made to bring the group into a general area of agreement. The final price that is going to be bid is not determined, but the group is pretty well brought together and those who are not willing to enter into that general area of agreement are allowed to withdraw. Also arrangements are made at that meeting to take up the interests of all those who have withdrawn.

At the final meeting, which is generally held on the day of bidding, around 9:30 A.M. or 10:00 A.M. if the bids are at noon, the manager focuses the views of the group on an actual price. It is still possible to have drop-outs, in most cases, at that final meeting, and anyone who so drops out must have his interest taken up by those remaining. If the drop-outs are less than 10 per cent of the issue, those amounts may be allocated automatically to other members. If they are greater than 10 per cent, the manager must take up the amount over 10 per cent or find others in the account willing to do so.

Generally, at the preliminary meeting, and sometimes at the final meeting, the percentage of the issue to be retained by each underwriter for retail distribution is also determined. That is, first of all, a matter of discussion which is then settled by the managers. From 50 to 60 per cent is the customary percentage to be retained by the participants, depending on the outlook for group sales to institutions and whether or not dealers outside the group are to be permitted to come into the offering on a very wide scale. Also, at the final meeting, the selling concession, if any, is usually determined.

In some cases both the selling concession and the public offering price are not determined until after the bids have actually been submitted. That is usually true when there is uncertainty in regard to the proper offering price. For example, there might be a high degree of certainty that a bond issue could be sold on a 2.75 per cent basis, but much less certainty that it could be sold on a 2.73 per cent basis. A bid of a small spread of \$3 or \$4 off of a 2.75 basis might be submitted. If this is the successful bid and the other bids are close to it, it might then be decided to offer the securities with a good spread on a 2.73 basis. In some cases the difference between the two bases might increase the spread by \$5 per bond, or $\frac{1}{2}$ of 1 per cent.

PROCEDURE AFTER PURCHASE

When an issue is bought, the buying officers of the manager must execute the purchase contract and approve the final filing of the amended prospectus and registration statement by the issuer. The manager supervises the syndication. He takes care of all the bookkeeping on underwriters' participations—the amount of retained securities and the amount

given up to the manager for either group sales or selling group. If group sales are made, he makes them to institutions and he offers whatever has been agreed upon as the amount to be sold to dealers, sending out telegrams on the night before the offering immediately after the registration statement becomes effective for receipt the following morning. He also handles all incoming calls with respect to that part of the issue sold to dealers.

EXAMPLES OF COMPETITIVE BIDDING OFFERINGS

In 1946, the Consolidated Gas Company of Baltimore sold an issue of $2\frac{3}{4}$ per cent bonds due in 1981 under competitive bidding. A comparison of some of the facts regarding that issue with the example of negotiated financing mentioned earlier may be of some interest.

The Consolidated Gas issue was comprised of \$44,660,000 of $2\frac{3}{4}$ per cent, 35-year bonds. They were offered on May 2, a day on which, as we saw before, the government bond market was decidedly weak. Three groups bid for the issue. The winning group reoffered the bonds very successfully at a price to yield 2.55 per cent. The over-all spread was 0.9466 per cent per bond, as against $2\frac{1}{2}$ per cent per bond for the negotiated issue back in 1938. It should be stated, however, that a spread of 0.95 on a utility issue sold in competitive bidding is a relatively liberal spread and its size was due primarily to the weakness of the market on that day. The dealers' concession was $\frac{1}{2}$ of 1 per cent, out of which a reallowance of $\frac{1}{8}$ of 1 per cent could be given to members of the NASD. Again, the selling concession was substantially larger than customary because of the uncertainty of the market. The terms of offering were, of course, set before the success of the offering was known. In this case, approximately 20 per cent of the bonds were sold to members of the selling group, and 80 per cent were sold directly at retail by the underwriters, including about 17 per cent sold by the manager for the account of members of the group directly to institutions (group sales). The 20 per cent sold to dealers compares with 27 per cent on the negotiated issue in 1938. There were 50 underwriters of this issue as against 86 for the negotiated issue and there were 86 selling group members as against 510.

Later in May of 1946 the Illinois Power Company sold \$45,000,000 of bonds. The government bond market had been advancing sharply for several days, but the general outlook for the government market remained uncertain. There were two syndicates bidding for the issue, and it was quite obvious to both syndicates that the issue would be salable on a 2.75 per cent basis. It was extremely doubtful that the issue would be salable on a basis even slightly below that. Therefore, the bidding was really fundamentally on spread rather than on price. The group that

purchased the bonds, which contained 61 members, bid approximately \$5 per bond, or $\frac{1}{2}$ point off a 2.75 basis. They were reoffered to yield 2.75 per cent. The manager in that case decided to retain 50 per cent of the bonds for distribution by the manager, but the distribution was to be made not to dealers but to institutions on a group-sale basis. The underwriters retained the other 50 per cent for direct distribution. They were permitted, if they cared to do so, to allow a concession of $\frac{1}{8}$ of 1 per cent to dealers. It is quite safe to say that virtually none of the underwriters sold any bonds at less than full list price because it cut their profit substantially to do so. They obviously sold them at full list price to retail investors. In that case, the dealers outside the underwriting group had practically none of the issue for sale. It was a very successful issue.

EFFECTS OF COMPETITIVE BIDDING ON CONCENTRATION

As was previously pointed out, one of the main purposes of imposing competitive bidding on issuers and on investment banking has been to diminish the concentration of a major part of securities underwriting in the hands of a few investment banking firms. The TNEC statistics mentioned earlier have been widely quoted. It will be recalled that these statistics showed that about 57 per cent of all registered security offerings managed by investment banking firms in the $5\frac{1}{2}$ -year period ended June 30, 1939, were managed by 6 firms, that a total of about 79 per cent were managed by 20 firms, and that almost 91 per cent were managed by 38 firms, leaving 9 per cent to be managed by the balance of the industry.

We have made a study of the statistics published by the Securities and Exchange Commission covering all issues sold under Rule U-50 through December 31, 1945, a period of about $4\frac{1}{2}$ years. It was found that of the issues offered for sale under the rule about 1.6 per cent were purchased by insurance companies without reoffering (70.0 per cent were purchased by accounts managed by 6 firms—not the same 6 as in the earlier period), 95.8 per cent were purchased by accounts managed by 20 firms, and the remaining 2.6 per cent were purchased by accounts managed by 12 firms. It will be noted that in the period studied only 32 firms managed 100 per cent of the issues purchased under Rule U-50 and reoffered through underwriters, as compared with 38 firms managing 90 per cent of the business in registered issues prior to the adoption of the rule. Moreover, the 6 leading managing firms for public utility issues sold under the rule seem to have managed a substantially larger percentage (70 per cent) than the 57 per cent of all registered issues managed by the 6 leading underwriters prior to the rule, and the 20 leading firms managed 95.8 per cent as against only 79 per cent prior to the rule.

It must be indicated that a comparison of different things is being made

here—that is, public utility issues are compared with all registered issues. Directly comparable figures for public utility securities are not readily available for the period prior to adoption of the rule. On the other hand, certain statistics presented to the TNEC on public utilities, while not directly comparable, indicate that there was considerably less concentration in the management of underwriting of public utilities than there was in all registered securities in the period prior to U-50. Therefore, it would seem that the comparison is valid, and if that is true, the conclusion is inescapable that competitive bidding has resulted in greater concentration of the management of underwritings than was the case prior to adoption of the rule.

Just how significant this greater concentration may be is, perhaps, open to question. In objecting to concentration, the proponents of competitive bidding also maintain that investment bankers have dominated issuers. No adequate proof has ever been advanced that investment bankers did dominate issuers except in a few isolated cases. The point, however, is that while competitive bidding seems to be resulting in greater concentration of the management of underwriting than might have been the case without competitive bidding, it may nevertheless be held that competitive bidding is successful in preventing domination in those few cases where existence of specific control of issuers could be demonstrated.

EFFECT ON REGIONAL DEVELOPMENT

In its release, dated April 8, 1941, accompanying the announcement that Rule U-50 had been adopted, the Securities and Exchange Commission said:

Competitive bidding will also be an advantage to smaller dealers and underwriters in that it will create for many investment bankers opportunities for underwriting which for one reason or another are not now open to them. Under our rule, for example, it will be possible for smaller investment bankers in various parts of the country to organize syndicates under their own leadership, and to bid, with equal opportunity, for the underwriting of issues, particularly those affecting their own communities. In this manner, we may reasonably expect that the problems arising from the present concentration of investment banking in the public utilities field will be met, and, through such participation, the smaller dealers and underwriters will be in a position to demonstrate that they can perform a more central role in the distribution of securities to the public than has been accorded to them for many years.

The statistics on competitive bidding published by the Securities and Exchange Commission covering the period ended December 31, 1945, indicate that in one or two cases local groups were formed to bid on issues, but that in only one instance during this period was the local group

successful in purchasing the issue. In fact, the available evidence indicates that the number of firms outside New York who have formed accounts under their management to bid competitively for securities is smaller than the number of firms outside New York which managed negotiated accounts prior to the adoption of the rule. Of the 38 firms which were considered the leading firms for the purpose of the TNEC study in 1939, 20 were considered as New York City firms, and 18 were considered as firms outside New York City. It is debatable whether this allocation between New York and outside New York was correct. Among the 6 leading firms listed as doing 57 per cent of the managing, only 3 were native to New York. One had originated in Boston, another in Philadelphia, and a third in San Francisco. Of the 14 other firms considered as New York firms, at least 6 had originated outside the city. Moreover, of the 18 firms considered as situated outside New York, virtually all of them have active New York offices which may transact a very substantial proportion of the business of the respective firms.

New York continues to be the financial center of the United States. The largest insurance companies are there, many of the largest banks are in New York, and it is the home of many other large investors. Therefore, New York is the largest single market for securities in the country. In distribution of securities, New York and near-by spots are probably almost equal in importance to all the rest of the country combined. Moreover, a very large number of prospective issuers have their head office in New York. So long as this set of facts remains true, the management of underwritings will probably continue to concentrate in New York. It may be desirable for other financial centers to increase in relative importance at the expense of New York, but it is doubtful that competitive bidding, as such, is a potent instrument to achieve that result.

Probably a majority of the leading investment banking firms in New York originated outside of New York. This is only natural. As a firm develops to a prominent position in a regional market, it frequently opens an office in New York. At first, this office may only be a listening post to determine what is going on in the financial markets. The New York office in turn often develops a good business, if it has aggressive management, and the office may finally become the principal office of the firm. Some day this may change, and Chicago, San Francisco, or some other city may be the leading financial center. But it should be remembered that a majority of the leading firms have offices in many of the financial centers outside New York and that as a result very little adjustment in their business organization is required to adjust to shifts in the importance of financial centers.

EFFECT ON PRICES

The opponents of competitive bidding have contended that competitive bidding would frequently produce unwarrantedly high prices which are unfair to investors, or low prices which are unfair to issuers. They have contended that unwarrantedly high prices would be produced in rising markets when competition would be particularly keen, and that unwarrantedly low prices would be produced in declining markets when competition would be substantially less keen.

Those who have favored competitive bidding have generally claimed this position was not warranted by the facts, although the staff of the Public Utilities Division of the SEC, on the basis of a study of 16 public utility issues sold in competitive bidding in the years 1935 through 1939 by public utility companies situated in Massachusetts and New Hampshire, admitted that the available information, which was of a sketchy and hence inconclusive nature, "tended to show a slight overpricing in relation to comparable negotiated issues but not enough to affect appreciably the investor's rate of return."

It has also been the contention of representatives of the investment banking business that "the market for a large new issue of securities cannot be measured precisely by the quotations for small blocks of outstanding issues of comparable quality. The market for a new issue is almost invariably somewhat below the market for outstanding issues, the amount of the difference depending on the size of the new offering in relation to the then existing demand. It is a problem in supply and demand for the particular offering. New issues must, therefore, rise in value in secondary trading (on the average over a long period) in relation to the market." The staff of the SEC has never admitted the complete validity of this argument but has maintained that even a slight rise in price subsequent to termination of the distribution is an indication of underpricing.

There is now a large amount of information which was not available in 1940 on the action of issues sold in competitive bidding. No one has as yet, it is believed, attempted to make a detailed or exhaustive analysis of these data. It seems a fair estimate, however, that close to 50 per cent of the issues sold in competitive bidding, measured by their dollar value, have been issues those in the business generally refer to as *sticky*. This does not necessarily mean that the entire issues were not in due course sold at the issue price, but it means that the period of distribution extended over an appreciable length of time, and in some cases the price of the issue broke rather badly before distribution had been completed. Approximately one half of the issues were completely distributed within the first day or two of distribution.

There have been a number of analyses made of the market behavior of

new issues subsequent to public offering for the period prior to the adoption of Rule U-50. These analyses showed clearly that new issues purchased through direct negotiation have generally been priced approximately in line with the market. This is particularly true of bond issues where the subsequent rise or decline has been within narrow limits and the average for all such issues has generally been a rise of approximately $\frac{1}{2}$ point.

While the evidence is "sketchy and hence inconclusive," it seems that the record with respect to the pricing of new issues purchased under competitive bidding is not quite so good as the record of pricing of issues purchased as a result of negotiation.

On the other hand, it does not seem that the record to date in this respect has been sufficiently bad to condemn competitive bidding on this ground. Until recently we have for a number of years been in a market which has on the whole shown almost a steadily rising trend. The bond market has at various times temporarily slipped off quite badly and there is considerable uncertainty as to the future trend of prices.

Competitive bidding has not yet really been tested in a declining market. Theoretically, it seems probable that bidders will tend to shy away (price-wise) in a declining market, with the result that issuers will under such conditions, perhaps, receive less favorable terms than might be received through direct negotiation; but, as stated, there is as yet insufficient factual information to prove this theoretical observation.

EFFECT ON SPREADS

The spread is intended to cover the expenses incurred by the underwriters, such as legal fees, advertising, telephone, telegraph, printing expenses. It also covers the selling concession to dealers, if any is given, and the balance is to take care of the underwriting risks of the underwriters.

Prior to the adoption of Rule U-50, the spread on most utility bond issues was 2 per cent, and the spread on preferred stocks and common stocks generally averaged considerably higher. These fees had for several years tended to remain relatively static, although they were substantially lower than the fees prevailing in the 1920's when interest rates were higher. In the controversy over competitive bidding, both the proponents and opponents expressed the view that the procedure would result in smaller gross spreads. Experience under competitive bidding has borne out this prediction, although, as was stated, this has been in a rising market.

In 1942, the average spread on utility bond issues, including telephone and other issues not subject to Rule U-50 but sold in competitive bidding,

was 1.12 per cent compared with 2 per cent prior to the rule. In 1943, it was 1.13; in 1944, 1.04; in 1945, 0.71; and in 1946, 0.71. Thus, the decline was from 2 per cent to 1.1, and then down to 0.7 of 1 per cent in 1945 and 1946.

On preferred stocks, the data are not very conclusive because there have not been enough issues. In 1942, the average was 3.4 per cent. This was reduced to 1.69 in 1943. It went up to 2.03 in 1944, dropped to 1.67 in 1945, and rose to 1.78 in 1946. It is probable that these averages are not really significant because there are too many variable factors entering into the situation. Probably there has been a decline approximately comparable to the decline in bond spreads, but not quite as great percentage-wise.

There were no common stocks issued in 1942. In 1943 the spread in such issues was approximately 4 per cent. In 1944 it jumped to 10.4 per cent, but that was due to one issue which had a very large profit in it. In 1945, the spread was 4.75 per cent and in 1946, 4.88 per cent. There does not seem to have been any tendency for the spreads on common stocks to come down.

In 1945, the smallest spread was on \$75,000,000 of Pacific Telephone & Telegraph Company bonds, offered on December 11. The spread on that issue was only \$3 per bond, but it was obviously priced to sell out quickly, so that there was very little risk in the offering. The largest spread on a bond issue in 1945 was \$17.30 per bond, almost 1¾ per cent, which was on \$19,000,000 of Laclede Gas Light Company 3½'s which were offered in March. This was a case of a distinctly second-grade issue, whereas the Pacific Telephone & Telegraph bond was a first-grade or top-grade issue. Obviously, there were substantial risks attached to the Laclede issue.

EFFECT ON SMALL DEALERS

Probably the best argument that was made by the opponents of competitive bidding was on the effect it would have on small dealers, the position being taken that competitive bidding would have an injurious effect. There are some 2,800 members of the National Association of Securities Dealers. Of that number, probably not more than 1,000 are active in new issue distribution, and of those only 200 to 250 are really active. They are dealers who are capable of underwriting. The smaller dealers have no capital to speak of. They have just enough capital to clear their transactions. They cannot take underwriting risks or real risks as selling group members. In other words, they cannot take down the security unless they have sold it.

Formerly, anywhere from 30 to 70 per cent of an issue was reserved for sale to dealers, and about 50 per cent of the gross spread, or 1 point on a

2-point spread, was given as a selling concession to the dealer who participated in the selling group. This was done in order to obtain wide-spread distribution, which was believed advantageous to the issuer. Since Rule U-50 has been operating, the proportion of the selling concession to the gross spread has gone down substantially on utility issues sold in competitive bidding (including here telephone and other issues sold in competitive bidding but not subject to the rule). In 1942 and 1943 the proportion was about 46 per cent. In 1944 it went down to 38 per cent; in 1945 to 35 per cent; and in 1946 to less than 28 per cent. Again, that is only for bond issues. There is a similar trend on preferred stocks, but not on common stocks. Of the 49 utility bond issues offered in competitive bidding in 1945, the selling concession was $\frac{1}{8}$ on 16 issues and $\frac{1}{4}$ on 24 issues so that 40 out of 49 issues had selling concessions of only $\frac{1}{8}$ or $\frac{1}{4}$. A concession of $\frac{1}{8}$ amounts to \$1.25 per bond. Out of this, the dealer must pay fifty cents transfer tax and all other expenses of handling and delivering the security. Obviously, there can be little or no profit left for the dealers.

Further, in a number of instances, that $\frac{1}{8}$ or $\frac{1}{4}$ concession, as the case may be, is not actually made available to dealers because they are unable to buy bonds less the concession. Thus, the 28 per cent previously mentioned as the percentage of the gross that was given to dealers in 1946 probably is an exaggerated figure because it does not take into account the fact that dealers are frequently not actually able to obtain securities for sale. The dealer is given an opportunity to work on the slow-moving issues which are often overpriced, but he seldom can purchase the faster moving issues at the offering price less the concession.

While the underwriters have also been affected by the reduction in spreads, the reduction in their profits has to some extent been offset by the fact that they usually have a substantially larger proportion of their participations for retail sale than was previously the case.

EFFECT ON UNDERWRITERS

Finally, competitive bidding has had an important effect on the fundamental position of underwriters. Many individuals in the investment banking business feel that their business is in many respects like a profession such as accounting or engineering; that the services underwriters render to issuers and to investors should be on a professional basis; and that it is desirable to increase the professional responsibilities of the business rather than to diminish those responsibilities.

Others have held that investment banking has no professional element in it whatsoever. It has been stated in a pamphlet issued by one of the proponents of competitive bidding that "Investment banking, after all, is

not a profession. The investment banker is primarily a merchant, who buys securities at wholesale for resale at a profit. The fact that he is in a position to profit by the advice he gives invalidates any claim he may make to stand in the same position with reference to the issuer that a doctor or lawyer does to his client. Neither the doctor nor the lawyer is a middleman. Let those bankers who, in the face of these facts, claim a professional status answer a question. Are they willing to assume, as do the members of the legal and medical professions, liability for disasters resulting from advice which is not disinterested?" This point of view regards the investment banker solely as a merchant.

There is a third point of view which was set forth in a brief of the Department of Justice, in 1944, in the so-called PSI Case. This says:

Another aspect of the security broker's trade stands sharply out. As an intermediate between the issuer and the purchaser of securities, he renders a service to each of the parties to the bargain. He is accustomed to advise the investor as to the types of securities which will best serve his needs; he is in a position to, and often does, advise the corporation as to the kinds of securities which will best serve its needs. Acting thus for two parties whose interests are not identical and may come into serious conflict, he becomes as it were an agent for each; his activities, therefore, are affected with a fiduciary character. He must not alone, or in concert with his fellow, serve one party at the expense of the other. Nor must he—as he could so easily do if he were unchecked—enlarge his province, increase his margins, and build up his own interest at the expense of the corporations and the investors between whom he mediates.

When reference is made to the fiduciary character of the investment banker's activities, the meaning is that investment bankers occupy a position of trust, without, of course, implying the legal responsibilities of a formal trusteeship. It would seem that the Department of Justice has expressed the view that investment banking is clothed with certain responsibilities which the ordinary merchant does not have.

The investment banker does have responsibilities, or at least he once had, to both issuers and to investors. Competitive bidding actually tends to destroy both of those relationships. The underwriter is completely at arm's length, as far as the issuer is concerned. Therefore, the underwriter attempts to make the best bargain with the issuer that he can. In rising markets this may work to the advantage of issuers, but in declining markets the reverse is probably the case. On the other hand, under competitive bidding the investment banker is no longer in a position where he can adequately represent the investor. He has no voice in setting up the provisions of issue which protect the investor, and competitive bidding procedure often forces him to offer securities at prices which he feels exact the last ounce the investor is willing to pay, rather

than at prices which seem fair to all concerned. Thus, the two responsibilities of investment bankers cannot really be carried out as they have been in the past. It is the merchant's role into which competitive bidding forces the investment banker.

REVIEW QUESTIONS

1. What factors account for the variation in the number of accounts formed to bid on various new issues?
2. What are the characteristics of a well-balanced account for competitive bidding?
3. What factors are considered in determining the amount of participation that each member of an account will have in the issue?
4. What documents are prepared by the issuer in connection with an offering for competitive bidding?
5. What important information is contained in the statement of terms and conditions prepared by the issuer?
6. What is an agreement among purchasers? What is generally contained in such an agreement?
7. What steps are usually taken by the group manager to guide him in recommending a bid to be made by the group?
8. What are the purposes of preliminary price meetings of members of the group?
9. What are the purposes of a final price meeting and when is it usually held?
10. What are the usual duties of the manager of a group that has made the successful bid?
11. What was the major purpose advanced by the government in advocating competitive bidding? To what extent has this purpose been accomplished?
12. Explain the effect that competitive bidding has had on:
 - (a) Concentration of control in the hands of a few leading bankers.
 - (b) Regional development of investment banking firms.
 - (c) Prices to the ultimate purchaser.
 - (d) Spreads.
 - (e) Small dealers.
 - (f) Underwriters.
13. The competitive bidding procedure has been in use for years in the sale of municipal securities. What bad practices are claimed to have been eliminated as a result?
14. What is the practice regarding the sale of securities in the railroad field—competitive bidding, or private negotiation?

UNDERWRITING SYNDICATES

by Percy M. Stewart of Kuhn, Loeb and Company

THE DICTIONARY defines the word *syndicate* as an association of individuals; or, rarely, a combination of companies united for the prosecution of some enterprise or scheme requiring large capital; or, several financiers combined to buy up stocks or certain commercial commodities with a purpose of commanding markets. The changes in our financial practices, however, have gradually brought about a distinct revision in our present-day conception of the meaning of the word.

When we, in our business, speak of a syndicate, we picture a group of investment banking firms, persons or corporations, each of which agrees to underwrite or sub-underwrite, to the extent of some previously determined dollar amount, the purchase and resale of an issue of securities.

Such a group, when constituted, is known as an *underwriting syndicate* or *underwriting group* and its members as *underwriters* or *sub-underwriters* as the case may be. The sub-underwriting group is, as its name indicates, merely an adjunct to the underwriting group and is used occasionally in cases where, for certain legal or strategic reasons, one or more underwriters, having assumed a larger underwriting responsibility than desired, reduce their liability by ceding to other underwriters, then called sub-underwriters, such portion of the commitment as suits their requirements. For our purpose, however, we will treat sub-underwriters in the same category as underwriters.

The various types of underwriting groups are as follows:

1. Those formed for industrial, public utility, railroad, and municipal bond issues sold directly to the public.
2. Those formed for industrial and public utility stock offerings likewise publicly offered.
3. Those formed for industrial and public utility bond or stock offerings which must be offered to company stockholders before being offered to the public.
4. Those formed for stock and bond issues offered either on the New

York Stock Exchange, New York Curb Market, or any other stock exchanges, or over-the-counter, as secondary offerings.

FORMATION OF UNDERWRITING GROUPS

While the general method of setting up all underwriting groups is much the same, there is great variance in the procedure, depending on the circumstances surrounding the issue.

Where directly negotiated industrial, public utility, and railroad issues are involved, preliminary negotiations with the issuing company sometimes last for several months. These are carried on by the investment banker (called *the originating banker*) having contact with the company whose securities are to be marketed. When a general agreement with the issuing company has been reached as to type and terms of the issue and an approximate purchase price, the originating banker then appraises the risk involved in the transaction and estimates the extent to which he wishes to share the liability. His first step is to determine, therefore, how many and which underwriting firms should be invited to participate in the transaction and in what amount. In reaching this decision much will depend on (1) the particular type of the issue, that is, whether a bond or stock issue, convertible or nonconvertible, mortgage or debenture bond, and so forth; (2) the amount involved and the issue's prospective salability; (3) the amount of the proposed underwriting spread; (4) the current condition of the security markets; and (5) the length of time for which the banker must remain committed.

It is obvious that while an investment banker with plenty of capital might believe that no undue risk would be involved in committing for the purchase of, say, \$5,000,000 of bonds of a front rank corporation and would most likely invite only a few underwriters to share his commitment, the same banker would, in the case of an issue of \$30,000,000 of preferred or common stock for the same industrial corporation, measure his responsibility much more carefully. Predicating his judgment on all of the conditions surrounding the issue as outlined above, he undoubtedly, in the latter case, would feel it prudent to invite a fairly substantial number of underwriters to share his liability.

A list of prospective underwriters is then compiled. This is an important and sometimes difficult operation. In choosing participants, several basic factors must be considered:

1. The market in which the company operates; if it is a nationally known concern this is not as important as if it is well known only in a particular state or locality. In the latter case, as many underwriters from that section of the country as are available should be included, if feasible.

2. The past records, if any, of other transactions for the same issuer are generally examined with the purpose of including, wherever possible and practicable, those underwriters who had participated in such previous issues and whose record of performance therein was such that it indicated they would be helpful in the current transaction.

3. In certain cases the issuing corporation must be consulted regarding the inclusion of certain underwriters for particular reasons. In this connection, despite the fact it is their privilege so to do, let me say that in my opinion, except in isolated cases, the issuer should not do more than suggest possible underwriters to the manager. It has been our experience that issuers almost always accept our judgment as to underwriters and do not force the inclusion of their own names.

4. The underwriting capital of the firms to be invited must be appraised. Since there are approximately 250 investment banking houses all over the United States available for underwriting, with capital running from \$75,000 to as much as \$15,000,000, it will be seen how difficult the task is. However, factors 1 and 2, that is, location of the market and past records, go a long way in helping the syndicate manager make his selections. It goes without saying that he must know the capital and distributive ability of each firm no matter where located. Since most so-called dealer lists comprise some 900 firms, this requires an intimate knowledge which can only be gleaned from long experience. Obviously, all 900 firms are not underwriters. As I said before, only about one fourth are in this class. Of the prospective underwriters, however, many with large amounts of capital have little, if any, real distributive ability.

5. The distributing ability of the firms to be invited must be considered. Since, as we have explained, an underwriter's primary function is to agree to buy securities, you may be puzzled as to why it matters particularly whether or not he can, after buying, resell them. As a practical matter, however, except in certain rare cases, it is all-important. The general practice in our method of distributing securities is to select as underwriters, in the manner outlined above, those firms which, on the basis of their record of past performance (of which, incidentally, every important originating firm keeps a careful chart), can do the best job of reselling the securities thus contracted to be purchased from the issuing corporation. The two operations, underwriting and distributing, go hand in hand because it is apparent that if underwriting firms simply took up the securities committed for under their underwriting contract, and then were unable to resell them to the investing public, it would not take long for underwriting capital to be fairly well locked up in unsold commitments. The consequent effect on markets could and, no doubt, would be disturbing; since, until undigested issues held by underwriters could be

liquidated, new transactions could not be properly underwritten, and the whole new-issue machinery supplied by investment bankers would be definitely stalled. For this reason, therefore, the distributive ability of the selected investment banker is given primary consideration.

In determining distributive ability, the banker depends on his own record of the performance of each prospective underwriter. Certain firms are excellent distributors of high-grade bonds but not as good at selling so-called second-grade, or speculative bonds which still other firms may be better equipped to merchandise. Certain houses are especially efficient, by reason of their particular clientele, in marketing both preferred and common stock issues. Strangely enough, some firms, one in particular of much prominence, will not underwrite stock issues. Again, there are some underwriters with large capital who, despite the fact they are not known as good distributors, are excellent underwriters. This is true because, even in cases where the issues underwritten may be unsuccessful, they can afford, because of their large capital, to take up and carry their share of the unsold securities with no subsequent ill effects on the general market as would be caused if the securities had to be disposed of immediately. Such firms are particularly good underwriters for an issue which must first be offered to stockholders, in which case a waiting period must ensue before the securities not taken by the stockholders can be re-offered publicly.

UNDERWRITING COMPENSATION

Competitive bidding for most public utility and railroad issues and all municipal bonds has, in the present low-interest-rate market, where large amounts of capital are available for investment, eliminated to a large degree any reasonable margin for underwriting risks in this field. This margin or compensation is more commonly called the *underwriting spread* and represents the difference between the price paid for a security and the proposed selling price of that security. As a practical matter, due to the same unusual conditions now prevailing, the underwriting spread for negotiated transactions is not in most cases as great as it will and should be when we have declining markets and/or larger demands for new capital. One of the reasons for the small spread situation which prevails in the competitive bidding field is that the securities purchased can in most cases be reoffered almost immediately, subject, of course, to subsequent approval of the proper public authority. The availability of purchasers is fairly well known in advance, and therefore the purchase commitment does not carry with it as many unknown factors as are almost always involved where a considerable waiting period must ensue.

This, however, is not always true even in the present competitive sales of larger amounts of railroad and, in some exceptional cases, public utility bonds. Sometimes, in these special cases, certain definite unknown factors compel underwriting groups to provide larger underwriting compensation for themselves to offset the risk involved. To illustrate, in July, 1945, a prominent eastern railroad invited competitive bids for \$50,000,000 of its bonds, but due, obviously, to the difficulty in being able to decide whether or not the bonds could be safely remarketed, neither of two underwriting groups formed for this purpose submitted a bid. Yet only one week later two separate bids were submitted for \$175,000,000 of American Telephone & Telegraph $2\frac{3}{4}$ per cent bonds, which represented the largest single piece of corporate financing on recent record. The winning group in this case operated with an over-all underwriting spread of less than $\frac{1}{2}$ of 1 per cent. Of course, the advance interest in the bonds was so extensive that there was little or no underwriting risk in the transaction, and this accounts for the small size of the compensation provided. That the winning underwriting group had properly appraised the marketability of the bonds was immediately apparent since they were resold in about two hours.

In the case of industrial and public utility stock offerings (whether negotiated or competitive), each transaction must be appraised in the light of the existing conditions, in the manner outlined before, and the required margin of underwriting profit measured accordingly. On stock transactions there is more potential risk because of the greater market fluctuations, and the margin of underwriting compensation should be larger. This is increasingly important if the securities in question have to be offered in the first instance to company stockholders. In such cases, the underwriting liability sometimes must run for as long a period as thirty days, and so much can happen marketwise in that period that even a substantial underwriting fee may very often prove entirely insufficient to cover the risk involved.

UNSUCCESSFUL UNDERWRITINGS

While in the last few years there have been no notable illustrations of unsuccessful underwritings, back in 1937 there were two particularly conspicuous examples. The first instance covered the underwriting of some \$44,000,000 of Pure Oil Company 5 per cent convertible preferred stock, which was offered for subscription at 100 to the common shareholders of that company on September 3, 1937, with the privilege expiring on September 24. The offering was underwritten by a group of 41 underwriters for an over-all spread of $2\frac{1}{2}$ per cent. Since, in the three weeks subscription period, the stock market suffered a severe decline, the stock-

holders naturally did not exercise their rights. The underwriters were advised on September 27, 1937, that they had to purchase over \$43,000,000 of the stock, as only 8,000 shares of the preferred had been subscribed for. It was decided that such a large amount of stock could not, under the unsettled market conditions which were then prevailing, be successfully marketed. The underwriting account was held together by periodic extensions until on March 10, 1938, it was finally dissolved. Each underwriter was then free in his own discretion to dispose of his share of the unsubscribed stock, for which he had paid the company \$100 per share in October, 1937. Initial trading took place at around 74. Obviously, in this situation those underwriters with small capital were forced in most cases to liquidate immediately and of course suffered a severe loss. Those with plenty of capital, however, could, and in some cases did, withhold their stock from the obviously depressed market and eventually sold it at substantially higher prices. It is interesting to note that by July, 1938, the stock had recovered to above 85. It was not until 1941, however, that the stock sold again as high as 90.

The second instance, which, incidentally, occurred during the same year, concerned an issue of \$48,000,000 of Bethlehem Steel Corporation convertible debenture 3½'s which were offered for subscription at 100 per cent to the stockholders of the company on September 8, 1937. The privilege expired on October 1, 1937, and the offering was underwritten by a group of 25 underwriters for an over-all spread of 2 per cent. Here, too, because of unsettled market conditions during the subscription period, the stockholders took up only \$4,000,000 of the debentures. The underwriters decided to attempt to market the balance of \$44,000,000 at a price of 95½ per cent through the original underwriting group augmented by 600 dealers to whom a 1 per cent selling allowance was offered. Unfortunately, the issue was offered on a day in which the stock market was quite weak. The sale was not at all successful, and finally, 10 days later, on October 15, the debentures sold down to 85 in the open market. During the ensuing months of 1937 the bonds remained around this price. By the end of 1938, they were back to par, and prior to their subsequent repayment by the company sold as high as 112 per cent during 1940. In this operation, too, the underwriters with the largest amount of capital, which enabled them to carry their obligation for a longer period, netted the best ultimate result. However, in no individual case was this very satisfactory, to say the least.

In both of these operations it is only fair to say that, to some extent at least, a portion of the large price decline can be attributed to the fact that the underwriting risk had not been spread as far, perhaps, as it should have been. This was true because, in the early days of registering new

security issues under the Securities Act, managing underwriters were inclined to include fewer underwriters with much larger participations than they customarily include.

SUCCESSFUL STOCK UNDERWRITING

Fortunately, all underwritings do not prove as expensive and difficult as the cases just cited. An illustration of one of the most successful recent stock underwritings was the underwriting for the Pan American Airways, in which my own firm happened to be the managing underwriter in association with three other firms whom we invited to share our obligation. This transaction took place in July, 1945, and grew out of an original standby underwriting commitment which the company had made several months before with an investment trust. As a result of a considerable rise in the price of Pan American stock, the underwriting commitment with this investment trust, which was subject to cancellation at Pan American's option under certain conditions involving penalty payments to the underwriter, became disadvantageous to Pan American. It is particularly important in connection with this transaction to note that the latter's right to cancel its underwriting agreement with the investment trust expired on June 30, and our advice had not been sought until around June 19. The fluctuations in the price of Pan American stock during this 11-day period were quite extensive. It had been as low as 21 $\frac{3}{8}$ on June 20, and closed on June 28 at 26.

Without attempting to go into the complexities of the deal, it is sufficient for our purposes to say that quite suddenly, on June 28, we were asked to underwrite an offering of 2,043,000 units of Pan American Airways. These units were to be offered, in the ratio of one unit for each two shares of stock held, to the company's stockholders of record as of June 28 for subscription by them at the price of \$21.50 per unit on or before July 23, 1945. Each unit subscriber received one new share of Pan American Airways and a stock purchase warrant which entitled the holder to subscribe at \$18 per share for one additional share of capital stock of Pan American at any time on or before December 31, 1947.

Since the subscription waiting period was 21 days, the hazard of underwriting such a large amount of new shares, and in such a volatile stock, was great. In conjunction with our comanagers, however, we definitely decided that the stock subscription warrant had a value under any reasonably conceivable circumstances of from \$3 to \$5. If our conclusions were right—and as there could be no advance market trading in the warrants we could not check our appraisal—it removed, to a considerable extent, we thought, the real danger in our underwriting commitment in the event a sizable decline in the market price of Pan American stock

should occur. It was our opinion that the price of Pan American would have had to decline to somewhere between \$18 and \$16 a share before being lower than the subscription price after deducting the value of the warrants as we appraised them.

At any rate, we decided that the deal was properly underwritable. Since the four managers in our group had to make a joint commitment to the company late in the afternoon of June 28, we each had an overnight underwriting commitment of well over \$10,000,000, because by the time the agreement with Pan American had been signed it was too late in the day to contact any other potential underwriters to share the responsibility.

You will recall that certain fundamentals for selecting underwriters were outlined for you earlier. In this transaction we naturally chose those firms which were primarily houses interested in stock underwritings and, likewise, of sufficient capital means so that they could readily take the risk involved. Our list of potential firms comprised approximately 85. We started contacting these firms at 10 A. M. on the day following our commitment with Pan American, and by three o'clock in the afternoon of that day we had signed acceptances from 65 in all, which included the four managers. The remaining 20 firms contacted declined to go along, primarily because they were either unwilling to assume the very real risk, or because the time given to explore the transaction and come to a decision was too short. This, incidentally, while true, was unavoidable under the circumstances.

The underwriting agreement called for total compensation of 75c per unit. Of this amount, the four managers retained 15c as management fee. At the close of the market on July 23, when the subscription privilege expired, Pan American Airways was selling at $17\frac{7}{8}$ and the warrants at $5\frac{3}{4}$. Since the value of the units on this basis was $23\frac{5}{8}$ as against the subscription price of $21\frac{1}{2}$, the subscription was very successful, and the underwriting group had to take up only 110,642 units (slightly over 5 per cent), which were distributed to the respective underwriters for their own disposition. This somewhat unusual and interesting underwriting transaction turned out to be a highly successful operation which benefited Pan American Airways materially despite the necessity of a penalty payment to the earlier underwriter, and the underwriting group likewise profited most satisfactorily. It might be interesting to note that in January, 1946, Pan American stock was selling at 25, and the warrants, as mentioned before, each one of which gave the holder the right to buy one share of Pan American stock at \$18 per share prior to December 31, 1947, were selling in the market at about $12\frac{1}{4}$.

AMOUNT AND DIVISION OF UNDERWRITING SPREAD

There is no formula by which to determine the size of the underwriting spread. This depends in all cases on the various factors mentioned before. It is probably sufficient to say that the greater the risk the larger the spread should be in any given transaction.

The underwriting fee as already explained, or, as it is generally termed *spread*, is usually divided into three parts:

1. Management fee.
2. Underwriting compensation.
3. Selling commission.

The management fee varies of course with the size of the over-all spread. This fee is the compensation paid to the originating banker (or bankers) for his (or their) services in the transaction. These services comprise:

1. Original negotiations with the company as to provisions of issue, and so forth.
2. Supervising the preparation of the registration statement for SEC and such other data, offering prospectus, contracts, and so forth, as may be required for the sale of the security.
3. Setting up the underwriting group.
4. Arranging and supervising underwriters' inspection trips and meetings.
5. Arranging for qualification of the issue in various states (called *blue skying*).
6. Concluding price and spread arrangements with company.
7. Securing final approval of public authorities where needed as to all factual data to be used in public sale.
8. Managing the public distribution of the securities, including in this particular the allocation of the amount of the issue to be sold by each underwriter, the sale for the account of the entire group of such amount of the issue as seems desirable to large institutions and other buyers, and formation of the selling groups and allocation to its members of a proper portion of the securities.
9. In the event of an unsuccessful transaction, the continuing responsibility for stimulating sales or, in the event this is impossible, the placement, if feasible, of the undigested balance at some lower price (after the account has been dissolved) to one or more large buyers.
10. Managing the delivery of and payment for the securities. Settlement of all obligations and final accounting to participants.

THE MANAGEMENT FEE

Obviously, the managing underwriter plays a most important role in this business. It is general practice for the management fee to be fixed at something between $\frac{1}{8}$ of 1 per cent and $\frac{1}{2}$ of 1 per cent, depending entirely on the size of the over-all underwriting spread available. This applies only to negotiated transactions.

In the case of competitive transactions, usage has gradually brought about the employment of a formula calling for the management fee to be fixed at 5 per cent of the gross spread as determined when the issue price of the security has been fixed *after* the bids have been opened. Since in most competitive transactions, particularly those in high-grade securities, the over-all spread has been as small as forty-six one-hundredths, the managing underwriter's fee in such a case would amount only to about \$10,000 on a \$50,000,000 issue.

The responsibility of the managing underwriter is in some respects greater in a competitive transaction than in a negotiated deal, despite the fact that certain of his responsibilities as mentioned before, such as original negotiations with the company, preparation of registration statement, blue skying, inspection trips, and so forth, are either eliminated or greatly eased. This is true because determining the final price and spread becomes, in large part, his major responsibility. It is thus his function to appraise the amount of potential buying and the price at which such buying might disappear. Sometimes it becomes problematical whether an issue can be properly marketed at any price under the competitive bidding system. and in such cases the managing underwriter must be prepared to advise his group, in an intelligent way, whether to submit a bid or not. The burden sometimes becomes particularly onerous in such cases, since a larger-than-customary underwriting spread must be provided for in such doubtful situations and the management fee of 5 per cent of the gross spread could become a sizable fee. For instance, in a \$100,000,000 deal, a 2 per cent spread would provide a minimum fee of \$100,000. The manager is thus provided with a so-called *cushion* which other underwriters might regard with suspicion in passing judgment on his final recommendation as to the price to be bid. It is safe to say no manager has or would let such a consideration sway his judgment in the least. In a recent transaction with which we happened to be identified, and which illustrates particularly management responsibility, we voluntarily lowered the amount of our management fee in order to eliminate any possibility of criticism of this kind. Perhaps you may think me prejudiced when I tell you it is my personal opinion that in a great many cases the manager, under present-day conditions, is, if anything, underpaid considering the work and responsibility that are his.

MANAGEMENT FUNCTION IN A COMPETITIVE ACCOUNT

The transaction referred to above took place in September, 1945, and involved the competitive sale of \$125,000,000 of Southern Pacific Company bonds. When the preliminary announcement of the transaction was made, two large bidding groups were formed. Now, as some of you may

know, this railroad, in common with most others, had, prior to the war, many problems facing it in connection with its finances. However, it embarked on an orderly and well-conceived debt-reduction program beginning in 1941 which, by 1945, had restored its former fine credit position to a large degree. Nevertheless, its debenture obligations ($4\frac{1}{2}$'s of 1981), which had been as low as 30 in March, 1938, and again in June, 1940, were still selling in the market in 1945 at a low of 84.

The issues to be sold consisted of \$25,000,000 of 15-year and \$50,000,000 each of 40- and 50-year refunding mortgage obligations. \$125,000,000 was a very large amount of railroad bonds, and while the security and entire setup of the deal were excellent, it was exceedingly difficult to judge the prospective response of the institutional buyers who held sizable amounts of the bonds which were to be refunded in the operation.

In order to divide the risk as much as was feasible, we formed the largest and broadest underwriting group we could satisfactorily put together. When finally constituted, it comprised 105 firms, covering 20 states, with underwriting positions at the inception of the account running from the smallest of \$200,000 to \$3,500,000 for the major interests, including ourselves.

Bids which had been called for on August 28 were to be opened on September 11. Unfortunately, at this particular time our bond market was declining and the trend of all markets not encouraging. We had made a thorough canvass of prospective institutional buyers prior to the first meeting of our group, and the response was not very stimulating. It was clear that the price at which the new bonds could be marketed would not reflect their real market value, because of the large amount and the unsettled condition of the market. The institutions were decidedly interested, but to what extent and at what price it was difficult to appraise. Our preliminary survey showed that less than \$30,000,000 could be readily disposed of.

In the meanwhile, and prior to the final meeting of our group, 22 of its original members, with underwriting interests aggregating \$31,000,000, had for one reason or another dropped out of our account which, of course, automatically raised the amount of the remaining members by a full 10 per cent. In this connection, it should be noted that most competitive bidding underwriting contracts include the right of the account manager to raise or lower any participant's underwriting commitment by an amount not to exceed 10 per cent. It became necessary, therefore, for many of the members of the account to increase the amounts of their participation to a much larger figure than 10 per cent, since we had lost almost 25 per cent in participations. This was accomplished satisfactorily, primarily because no underwriting interest was excessive at the in-

ception of the account. Major interests were raised from \$3,500,000 to \$5,000,000 and our own amount as manager to \$7,290,000. It was obvious that those who dropped out had too many reservations about the chances of selling such a large amount of bonds, under the prevailing conditions, to warrant their continuing in the account.

Our account's initial meeting took place on September 10. Because of the generally unsatisfactory preliminary marketability indications, most of our discussions centered on the possibility of being able to submit a bid at any price. While there was no limitation on the coupon, although a price of 98 was required, the company had plainly indicated by indirection that it would not accept a bid for a coupon above $3\frac{3}{4}$ per cent since the bonds to be refunded bore a 4 per cent rate. It had more or less indicated it thought it should receive a $3\frac{1}{2}$ per cent rate for the longer term issues. No definite conclusion was reached at this meeting, although the majority opinion definitely favored an over-all spread of two points as a minimum, irrespective of the price. The next day it was rumored that the other group did not plan to bid for the two long-term issues but would, however, probably submit a bid for the \$25,000,000 short-term issue.

Despite the discouraging situation, we were of the opinion that the bonds could be sold if they could be brought to market at such an attractive price that institutions just could not afford to lose the buying opportunity. We accordingly advised our group of this opinion and simultaneously, in order to remove any question of prejudice because of the management fee coming to us, voluntarily reduced this fee to a fixed amount of \$50,000 instead of \$112,500 which it would have been under the formula agreed upon. The group finally accepted our judgment and decided to submit a bid of 98 for all three issues, the short-term issue as $2\frac{7}{8}$ per cent, and the two long-term issues as $3\frac{3}{4}$ per cent bonds. When the bids were opened there was only one other bid for the short-term issue which was less than our bid for this issue, and ours was the only bid for the two long issues. As soon as the Southern Pacific Company had given us the award, our group reoffered the bonds at $99\frac{1}{2}$ per cent for the 15-year maturity, 100 per cent for the 40-year and $99\frac{3}{4}$ per cent for the 50-year bonds, with a selling commission of 1 per cent on the long and $\frac{1}{2}$ per cent on the short bonds. All sales, of course, had to be made subject to the approval of the Interstate Commerce Commission.

As we had hoped, the response was excellent. The attractive yield on the bonds tempted many institutional buyers to change their minds, and by 10 A. M. the next morning we were able to announce the completion of the sale of both issues of long bonds. The short-term bonds did not go as well, however, and it was not until the end of September that we were

able to complete the marketing of this issue and close the entire account. The manager's leadership in this case, it seems fair to say, was all-important in bringing about the successful result.

While the company was disappointed, in that it did not receive the price to which it was entitled, and perhaps might well have received had the transaction been a negotiated one instead of a competitive deal, it nevertheless was enabled to complete its financing program advantageously.

Another such transaction, which, however, did not bring forth quite as satisfactory a result, had to do with a competitive transaction for approximately \$53,000,000 of Pennsylvania Railroad general mortgage bonds. This company issued a notice on December 23, 1944, that it would receive bids on January 9, 1945, for these new bonds, which were to refund outstanding 4½ per cent debenture bonds. Bidders were asked to name the coupon rate, but this was not to be in excess of 3½ per cent. We forthwith formed an account comprising some 76 underwriters picked by us on the general basis outlined earlier. A preliminary meeting was held on January 5, 1945. Only one other bidding account so far as we knew had been formed. We could get very little advance encouragement from prospective institutional buyers prior to this meeting, although there seemed to be pretty general agreement that the bonds should be worth somewhere between a 3.05 per cent and a 3.15 per cent basis. At any rate, at our final meeting on January 9 our group decided to bid 100.60 for a 3⅓ per cent coupon, which won the award. To everyone's surprise, one of the largest life insurance companies submitted a bid of 99.675 for the same coupon while the other competing group named a price of 99.56, also for 3⅓s. The large difference between our bid and the other two bids (called *cover*), amounting to almost one point, brought about poor initial sales when we reoffered the bonds at 101.68 per cent. This price gave us an over-all spread of 1.08 per cent. Of this, selling commission was fixed at 0.50 per cent and the management fee 0.054 per cent, leaving underwriting compensation at 0.526 per cent gross.

Including two group sales of \$5,000,000 each, we estimated that by the end of the week slightly less than one half of the bonds had been sold. Little progress was made during the balance of the month, although the general bond market showed definite signs of strength. Naturally, with a large amount of unsold bonds available, it was difficult to interest new purchasers because of their fear that the account might shortly be dissolved and a decline in the price of the bonds would immediately result. This would have been natural, but the manager, in fulfilling one of his proper functions, made carefully guarded inquiries to see if there could

be a possibility of arranging disposal of all the unsold bonds at some concession from the original price.

Finally, early in February, this was accomplished at a price of 101, and almost \$26,000,000 in bonds held in varying amounts by the underwriters were sold privately to two large institutions. I should like to give you the details covering the arrangements for this operation which, as far as I know, was one of the largest, if not the largest of its kind ever consummated. Time will not permit now. The price obtained netted the underwriters a fair margin of profit, as their original cost was 100.60. Even more important was the immediate favorable effect on the bond market generally, since placing such a large undigested amount of bonds in the hands of long-term investors relieved the bond market of a substantial undigested issue. It also relieved the underwriters' capital positions and made it possible for them to consider, much more constructively than otherwise, further transactions, of which many were in immediate prospect. The effect on the price of this particular bond also was beneficial. In fact, only four months later the Railroad Company offered an additional amount of \$53,000,000 of the same general mortgage bonds for competitive bidding, and the insurance company, which had submitted a lower and losing bid in the January sale, was the winner on this second occasion, but this time paid 100 per cent for a 3 per cent bond as against its earlier bid of 99.675 for a $3\frac{1}{8}$ per cent bond. The actual difference in price amounted to \$1,500,000 on the \$53,000,000 of bonds.

In the above illustrations you will note how important a part the manager played in the over-all results and, at the same time, how the respective amounts of the management, underwriting, and selling commissions came about.

THE SELLING COMMISSION

Again, as is true of the management fee, there is no fixed formula for arriving at the proper underwriting and selling commissions. They vary with the over-all spread and the type of transaction. A pretty general ratio, however, after the management fee has been provided for, allows roughly, very roughly, about 55 per cent of the balance for selling commission and 45 per cent for underwriting. So that if we had a negotiated deal with 2 per cent over-all spread, the division might be roughly as follows:

1. Management, $\frac{3}{8}$ per cent.
2. Underwriting, $\frac{5}{8}$ per cent to $\frac{3}{4}$ per cent.
3. Selling, $\frac{7}{8}$ per cent to 1 per cent.

It is well to remember in this connection that the underwriters do most of

the selling and therefore they consider the spread, after management fee is deducted, as an over-all figure of $1\frac{5}{8}$ per cent.

In competitive bond transactions, as a matter of fact, the selling concession has been a very negligible factor in all but isolated cases, primarily of course because its size has generally been very small. Unless dealers receive proper compensation, they naturally will not make any special effort to distribute securities for underwriters of a competitive group where they receive no benefit for so doing. This, incidentally, is one of the outstanding weaknesses developed in the competitive bidding system but is a perfectly logical result of the ever-narrowing spreads.

EXPENSES CHARGEABLE AGAINST UNDERWRITING PROFIT

In all cases the entire expenses of the transaction are charged against the underwriting compensation. Since the expense of an average deal, either competitive or negotiated, runs anywhere from $\frac{1}{8}$ of 1 per cent to sometimes as much as $\frac{3}{8}$ of 1 per cent, this is always an important consideration in arriving at the proper over-all spread. Expenses borne by the underwriters (in some cases the issuing company shares some of these) include advertising, legal and engineering fees, printing and postage, telephone and telegraph tolls, blue skying, possible stabilizing losses, sales taxes (transfer stamps in case of stock issues), and many others.

GENERAL

While keeping before you all the formulae presented for your proper guidance in this syndicating or, as we call it, underwriting function of our investment banking business, it would be well for you to recognize that in the final analysis the most successful underwriting managers have to have, in addition, an insight which comes only after many long years of experience. This rare sense enables them to analyze well in advance the way a transaction should be received and, while it is being distributed, how it is selling and what steps should be taken to ensure its success.

CONCLUSION

Since you have already studied the important features of the necessity for investment banking and its underwriting operations to the economy of the country, I shall not attempt to elaborate. I should like to emphasize, however, that this investment banking machinery of ours is one of the most important, perhaps the most important, part of our free enterprise system. In the future, as in our whole past history, we should continue to be the mechanism through which this country's industries will be financed. Syndicating, or underwriting as we now know it, is a vital part of that mechanism.

REVIEW QUESTIONS

1. Define: syndicate; underwriters; sub-underwriters; originating banker; underwriting spread; managing underwriter.
2. What four types of underwriting groups are there?
3. What five considerations govern the determination of the number of underwriting firms that should be invited to participate in an underwriting?
4. What basic factors must be considered in selecting participating underwriters?
5. What factors are considered in determining underwriting spreads?
6. What services does a managing underwriter normally perform?
7. Approximately what is the average underwriting fee for bonds in negotiated transactions? In competitive transactions?
8. What is the management function in a competitive account?
9. Competitive bidding underwriting contracts normally include the right of the manager to raise or lower participants' underwriting commitments by what per cent?
10. In general what proportion of the spread is allocated to management, to underwriters, to selling concessions?
11. What expenses are borne by the underwriters?
12. What per cent of the issue does this amount to generally?

THE NEW YORK STOCK EXCHANGE

by Eugene Lokey, Vice President, New York Stock Exchange

A. ORGANIZATION AND DEVELOPMENT

In order to arrive at a broad comprehension of the New York Stock Exchange and its work, it is necessary to examine this institution in two dimensions.

The building, with its great, open floor at Wall and Broad Streets, supplies the physical aspect of America's largest organized securities market. Upward of 145,000 visitors a year view a lively panorama on the floor from an elevated gallery, as 1,800 Exchange members and their aides conduct the purchase and sale of hundreds of millions of shares and a billion to more than two billion dollars (par value) of bonds annually. The scene at times may impress an onlooker as one of unending confusion amid a deluge of noise, whereas the Stock Exchange actually comprises a smoothly operating mechanism of men and machines developed over a period of more than 150 years.

In its second dimension, the Stock Exchange extends outward from its trading floor into practically all corners of this country and into many cities abroad. In this second dimension, the Stock Exchange is concerned with the lives and activities of the vast majority of the American population; with the financial operations of government; with the financial progress of corporations and institutions. The second dimension of the Stock Exchange, with the Exchange itself as the keystone, is built of its members and the 1,500 offices which their firms maintain from coast to coast, and in Canada, Cuba, England, Holland, Switzerland, and Venezuela.

More than that, the New York Stock Exchange, considered in the full scope of its organization and its facilities, is an adjunct of the entire securities industry, for 2,500 offices of firms which are not represented in the Stock Exchange membership are able to transact business expeditiously on the Exchange floor by means of correspondent relationships with individual member firms.

THE MECHANICS OF THE STOCK EXCHANGE

For the purposes of this discussion, emphasis should be laid primarily upon the physical aspect of the Stock Exchange, what it is and what causes its complex parts to function as a whole. When one fully grasps what the Stock Exchange is, the operation of its parts is the more easily understood.

The Stock Exchange is a market place and solely a market place. The onlooker from the gallery sees about 800 of the Exchange's 1,375 members engaged on the floor in filling orders for stocks and bonds. That is the business conducted there—the execution of orders; and the orders to buy and sell are for securities of the prescribed Stock Exchange list. Nothing except bonds, stocks, and *rights* to subscribe for new issues of securities are bought and sold on the Exchange. The great bulk of orders filled every day originate among the investing and trading public, more than 50 per cent of them coming from areas outside New York state.

A moderate percentage of a day's business originates among the members of the floor, to be described in some detail elsewhere in this presentation. But, broadly speaking, the Stock Exchange is a national and, in normal times, an international market, in which the buying and selling of thousands of individual investors and traders account for the volume of business transacted and establish the prices at which stocks and bonds are bought and sold.

AN AUCTION MARKET

In contrast with a market in which negotiation sets the price that results in a bond or stock changing ownership, buying and selling on the Stock Exchange are conducted by an auction method. Much the same methods of trade apply as are found in an auction of farm goods and chattels, or in the familiar auction of art objects seen along city streets or at seaside summer resorts. The auction principle provides that the highest bidder at any moment shall be the buyer; and, contra, the seller willing to accept the lowest bid at that moment shall dispose of his stock.

In a market as large as the Stock Exchange market, in which scores of different securities are being auctioned at the same time on different parts of the floor, when many bidders for the same stock are present at a given moment, it is essential that market processes be sufficiently elastic to permit business to be transacted fairly to buyer and seller. Let it be assumed (as often happens in busy markets) that 400 shares of a stock are offered at a price which satisfies bidders for 600 shares at that price. Obviously, all the bids cannot be filled.

If it be assumed, further, that a bidder for 300 shares of the lot offered

was the first to bid the acceptable price—the custom of “first come, first served” prevails on the floor—then 100 shares are left, but 300 are wanted. This would seem to be a time for negotiation over the 100 shares, but this does not happen. The disposal of the 100 shares is still to be determined; the qualifying bidders *match* for them, the spirit of the auction market remains undisturbed.

The form and substance, as well as the spirit of the auction method, have prevailed on the Stock Exchange ever since its start in 1792; and it may reasonably be asserted that every facility introduced by the Exchange during the years has been designed to serve the auction system. As applied to securities on a centralized market place, where business is pressing in from many directions, the essence of the auction is speed with accuracy and fair prices.

The necessity for speed and accuracy in the conduct of business on the Stock Exchange may be made graphic by citing some statistics. The number of brokerage firms represented by a Stock Exchange membership is approximately 600. Nearly all of them transact business with the public, and, supplementing the orders which are executed by them for their own customers, is a flow of orders which a great many of these firms receive for Stock Exchange securities from correspondent houses. Moreover, the daily volume of transactions is increased somewhat by purchases and sales originating on the floor, with the result that, in a year of only average business volume on the Exchange, 1945, a total of more than 900,000,000 shares were bought and sold in round and odd lots, including both common and preferred stocks.

This meant that an average of close to 3,000,000 shares of stock were bought and sold every business day.

The foregoing requires explanation, inasmuch as the figures would be found to be different from the reported record of transactions for that year. On the stock ticker appear only the *sales* and the prices. The reported *sales* of 1945 amounted to 377,563,000 shares. To be added to the year's dealings were transactions in odd lots consummated by odd-lot dealers which are estimated at approximately 20 per cent of the reported round lots of 100 shares each. Each sale involves a purchase, and the 900,000,000 shares comprised the closely estimated aggregate of all transactions on the Exchange in 1945.

Considering sales and purchases of 3,000,000 shares per day on an elapsed-time basis, allowing for the shortened sessions of the Stock Exchange on Saturdays, it becomes clear that machines must be used to supplement brains and skill in handling the business of a world market place.

MECHANICAL EQUIPMENT AND FLOOR ARRANGEMENTS

It goes without saying, however, that a machine, however useful, has to be located in a spot where it may be most productive of timesaving and a contributor to accuracy in filling orders. Before examining some of the mechanical equipment of the Stock Exchange, it is worth while to look at floor arrangements which further the usefulness of machines.

The observer from the gallery sees below him a number of U-shaped structures. These structures are the *posts*, and at each post certain designated stocks are traded. These stocks are dealt in nowhere else on the floor. Around the edges of the floor are a large number of 18-inch partitioned spaces, each containing a telephone. These reserved spots are rented from the Exchange by member firms and the telephones communicate directly with each renter's office; over the wire come orders to buy and sell securities, and back over the wire go reports on the completed transactions. The telephones are served by clerks in the renters' employ.

To the right, looking from the gallery, is seen a broad entrance into a connecting room; inside this room are located 6 of the 17 posts, one of them devoted to consistently inactive stocks. To the left is another large space; there the bond department is housed, nothing except bonds being dealt in. The lofty wall spaces to right and left hold the duplicate annunciator boards, upon which numbers are flashed, notifying members, each of whom possesses an individual number, that they are wanted at their telephones on the floor.

These briefly mentioned arrangements and facilities are, in one form or another, commonplace in any kind of a market—with prescribed trading areas, with convenient telephones, with room for buyers and sellers to move about freely as they appraise the goods in which they are interested. This is an *auction* market, however, equipped with instruments promoting quick and voluminous service for investors and traders.

For example, inside each post stand pneumatic tubes, and in each telephone section around the boundaries of the floor are smaller editions of the tubes. In fact, the pneumatic system for transferring written orders and other memoranda from one place to another, and from the floor to the *ticker room* five stories up in the Stock Exchange building, is some thirty miles in length.

Orders written out by clerks at the telephones may be shot by compressed air to any post. Records of executed orders are shot up to the ticker operators. Instead of going for him, or sending a messenger, a telephone clerk desiring to deliver a message to his firm's floor representative can press a button and the electrical signal system flashes a number on the annunciator boards on the walls; the member wanted then goes to

the phone or sends a *page* for the necessary message, should he be busy executing orders.

A closer survey of the posts shows that the name of each stock traded there is displayed at a particular spot on the outside, and that an indicator shows beside the stock's name the last price at which it was sold and, by a plus or minus sign, whether the price was higher or lower than in the last preceding sale. An approaching broker, with an order to execute, can know the last sale price without the need of asking anyone, and can prepare himself to participate instantly in the market upon getting into the *crowd*.

In an auction market, where prices may fluctuate rapidly, a constant knowledge of price movements is an important matter to workers on the floor. Therefore, throughout the business day, the system for projecting an enlargement of the running ticker tape shows actual sales and prices in the four corners of the floor, high above the heads of those below. All that is needed is to raise one's eyes, and a considerable section of the tape is on view.

This brief staging of the Stock Exchange floor scene does not include all of the facilities employed to make the conduct of business both convenient and speedy; further along in this discussion some of the implements of a highly specialized trade will be mentioned with some detail of descriptions and usage. But with the stage set, it is logical at this point to bring into the foreground the men and the processes they apply to operating the Exchange.

ORGANIZATION AND MEMBERSHIP

The New York Stock Exchange is a voluntary association of brokers and dealers in securities. Since 1929, when the state of public interest in stocks grew to such large proportions that an increased executive personnel was required by the firms transacting business on the floor, the number of members has been 1,375. Between 1871 and 1929 the membership was increased by only 40, namely from 1,060 to 1,100, so that it would appear that the 275 added in 1929 was reflective of unusual conditions in the national securities market.

The Stock Exchange in respect to its organization has, since 1938, been vastly different from what it was during the preceding century. In that year, in fact, it was completely reorganized. Previously, the structure and mode of operation resembled that of a private club; the government was in the hands of a member of the Exchange elected as president, who served without salary, and other members and firm partners comprised the Board of Governors. There were a number of committees. A chairman, when this office was added, was also a member of the Exchange. In

other words, the Stock Exchange, not being incorporated under state laws, was pretty much an institution sufficient unto itself.

In passing, it might be mentioned that until the enactment of the Securities Act of 1933 and the Securities Exchange Act of 1934, the securities industry had developed without any all-comprehensive controlling or directing forces emanating from federal statute. Many of the states have long had blue-sky laws in effect; but these have special application to the character of individual securities in which dealings are permitted inside state borders, while the conduct of market facilities is subject to the codes of civil and criminal law.

In the reorganization in 1938, the Stock Exchange's status as an association remained undisturbed. But many changes occurred. The first salaried president came into office; he had been a member but disposed of his membership before taking office. The number of governors was reduced and, for the first time, outside governors—three in number—were provided for. (This number of *public* representatives was later reduced to two.)

A highly significant alteration of management occurred through the elimination of all standing committees and the introduction of professional, full-time, salaried officers to conduct Exchange affairs.

It was provided that geographical distribution of Stock Exchange members and member firms should be accorded more weight than before, and by this decision the national character of the market place received a new recognition. The government body was thereafter composed of 10 members living in the New York metropolitan area, along with 4 *allied* or *nonmembers* of similar domicile, and 7 members of the Exchange or *allied* members or *nonmembers* living outside the New York City territory, with the proviso that at least 2 of the 7 be members of the Exchange.

The use of the term *allied members* is a matter of interest to students of the Stock Exchange's evolution. An allied member is a general partner in a Stock Exchange firm, although not a member of the Exchange. For many years, the self-contained Exchange organization held its members responsible for acts of the firms in which they were partners when discipline was called for. Member partners, furthermore, were held responsible for acts of their nonmember partners in contravention of Exchange rules or fair and equitable principles of trade.

As the human equation not infrequently figured in infractions of rules, and partner members were often unaware of another partner's activities across the border line, an inequitable application of justice sometimes occurred. As a result of the reorganization of Stock Exchange affairs in 1938, all non-Exchange-member partners of member firms were made

allied members and brought under the mantle of discipline. An allied member, unless he be a governor, has no vote in Stock Exchange management deliberations and an allied membership has no monetary value.

STOCK EXCHANGE SEATS

A member on the Exchange is often referred to as a *seat*. The term *seat* is a held-over description from the misty past of the elective privilege of buying and selling securities on the Stock Exchange. This privilege, vested in a membership in the Stock Exchange association, is an intangible, yet it has a monetary value.

Prices of memberships fluctuate over wide ranges, being influenced greatly by the volume of business conducted on the floor. In 1929, a year of exceptionally active dealings, prices established in transfers ranged between \$550,000 and \$625,000. In that year the number of memberships was increased by the addition of 275 new memberships. In 1932, when both general business and trading on the Stock Exchange were adversely affected by the depression, the price went from \$185,000 down to \$68,000. Between 1940 and 1946, inclusive, transfers were made at prices ranging from \$17,000 to \$97,000.

EXCHANGE MEMBERS AND THEIR WORK

The public conception of a member of the Exchange ranks him, usually, as a partner in a brokerage firm; for his firm he executes orders on the floor and the firm receives commissions from its customers on the orders carried out for them. The fact is that probably not more than half of the 1,375 members of the Exchange are partners in commission houses.

There are members who act as *dealers*—the *specialists* who at times buy and sell for their own account, although their principal function is to work for other brokers, sharing in the latter's commissions. There are *floor traders* who also act as dealers on their own account—free lances, they might be called, buying and selling with the purpose of profiting from price fluctuations. There are *floor brokers*, still known as *\$2 brokers*, although their share of the commission received by any member firm for whom they execute orders has long been on a higher basis per hundred shares, with a sliding scale providing less than \$2 for certain stocks. There is another group of members called *odd-lot dealers*.

Still another group of Exchange members spends its time in the *bond crowd*, executing orders in bonds. This group acts in several capacities, combining the functions of commission house broker, specialist, floor broker, and floor trader.

Over the years, the growing public interest in securities and the admission of new issues to the trading list brought about the divergent activities

of Exchange members by groups. Down into the 1880's, the roster consisted of commission brokers and floor traders, with the former category often buying and selling for themselves. The rising volume of public transactions necessitated a degree of specialization; beginning, probably, with the emergence of a group of floor brokers who would help out the partners of firms—commission brokers—when orders to execute were received in such quantity that the latter could not handle all of them. The commission broker could be in only one place at a time; so it was a logical development to enlist the aid of his associates on the floor in rush periods.

The specialist, who stays in one place all day and executes orders in a limited number of stocks only, fills an important role because of his duty to maintain an orderly market in the issues in which he specializes. There is at least one specialist in every stock on the Exchange list. In the process of his work, he keeps a book of buy-and-sell orders and their prices, executing them as fluctuations bring about the specified prices. Commission brokers receiving orders from their offices to be filled at specified prices which are away from the market file many of such *limited* orders with the specialist for execution. When prices are reflecting excited markets and fluctuating widely, the specialist as part of his work buys and sells, using his own capital, doing what he reasonably can to maintain orderly prices in his stocks.

The specialist's responsibility is heavy at times, requiring an alert sense of price tendencies to lessen his own capital risk; but, day in and day out, his work is centered principally in executing the orders entrusted to him for a commission. Basically, the specialist's transactions are concerned with 100-share lots of stock—the 100-share unit being the customary unit of trading in the great bulk of Stock Exchange dealings—although some specialists buy and sell stocks on orders involving less than 100 shares. Parenthetically, under Exchange rules, limitations on a specialist's trading for his own account protect the interest of the public in the latter's transaction with the specialist.

The bulk of less-than-100-share transactions are, however, lodged in the hands of *odd-lot dealers*, and this business constitutes a distinct department of operations on the floor. The odd-lot dealer's function is to divide 100-share units into whatever lesser amounts buyers want; also, to buy the lesser amounts offered by investors and traders through commission brokers and reconvert the pieces into 100-share lots, or sell them as odd lots.

Odd-lot transactions carry a price differential; the buyer pays an eighth more per share than the price which 100 share lots command and the seller receives an eighth less. This fraction is the basic differential; in

the case of some stocks it is larger. The fractional differential, in addition to brokerage commissions, compensates the dealer for the expense involved in handling business broken up into small lots, referring to any amount from 1 to 99 shares, inclusive. It should be mentioned that the unit of trading in a small number of stocks is 10 shares.

Since 1930 or thereabouts, the class of Exchange member known as *floor trader* has been dwindling until few of them remain. The dull markets of such years as 1934, when fluctuations were narrow much of the time, the restrictions laid upon free-lance dealings by law, and altered Exchange rules crippled such operations. The rise of income taxes also has laid a heavy hand upon in-and-out transactions which aim, usually, at a transient gain as prices fluctuate. Thus, many floor traders of past years now operate as *floor brokers*.

It is logical to mention at this point a changed Exchange rule of procedure regarding short sales applying to public as well as floor traders. It is required that the price entailed in a *short* sale shall not be below the last "regular way" sale price of the stock, or at that price unless such price is above the last "regular way" *different* price of the stock.

As short selling, when it was unrestricted, afforded skilled floor traders much of their opportunities for a quick profit, this change, of itself, restricted their activity. High taxes on income, however, have laid the more severe handicaps upon floor traders.

A final class of Stock Exchange members must be mentioned. These are the holders of memberships who seldom if ever appear on the floor; who are not, in numerous instances, connected with any firm; who, in some cases, seldom transact business on the floor through any medium. Occasionally, a membership is held in an estate for years before it is disposed of. Very many ostensibly dormant memberships are, nevertheless, valuable to the holders for this reason: they may be large investors, buying and selling extensively securities dealt in on the Exchange. Membership entitles them to a lower-than-regular commission charge on listed stocks and bonds they buy and sell if they transact their business with a member firm and, if they elect to operate on occasion upon the floor, they have no commission to pay. On large-scale business, the savings are substantial.

The matter of savings in the form of reduced costs in buying and selling securities listed on the Stock Exchange may be referred to in connection with Exchange members whose firms (firms in which they are partners) transact business extensively *outside the Exchange in the unlisted market*. This could seem like a paradox—a contradiction of much that has been written here about participation in a market place which maintains a certain air of exclusiveness, its rules and procedures being pivoted

around the most ancient of all its regulations: the agreement of 1792 that the members would consider themselves bound to give preference to one another in their transactions.

There is no contradiction, however. Again reference must be made to the march of events in industry and finance and its force in molding the utility of the Stock Exchange. The securities industry as a whole is divided, in respect to its methods of transacting business with and for the public, into firms which act either as commission brokers or dealers. The commission broker charges a fee when he fills orders; the dealer buys and sells for his own (or his firm's) account, acquiring his remuneration from price differences between purchase and sale prices. Dealers and dealer firms developed under the influence, in large degree, of the need for *new* financing of railroads, public utilities, and other companies after the nation struck its stride of rapid expansion following the War of 1812.

Many of the large modern investment banking houses engage chiefly in the buying, wholesaling, and retailing of newly issued securities, whereas the securities of the Stock Exchange list are issues previously distributed among investors and brought upon the Exchange to facilitate convenient and speedy transfer of ownership from one investor to another. Dealer firms, although their chief undertakings may be in the market outside the Stock Exchange, have customers who prefer to buy and sell stocks or bonds of the Stock Exchange list, and membership on the board is frequently held by one or more partners of such firms as a convenience.

It should be noted, too, that many member firms whose principal business is in listed securities maintain also departments active in dealer transactions in the unlisted market.

B. NEW YORK STOCK EXCHANGE MEMBER FIRMS

In early 1947, the firms enjoying the privilege of buying and selling as members of the Exchange were partnerships; they always had been partnerships, unincorporated under the laws of any state. Emphasis is laid upon this fact for the reason that a debate is presently under way among the membership pro and con the proposition that individual member firms, if they so elect, may change from partnerships to incorporated companies. The debate revolves principally around the question of taxation as applied to corporations and partnerships.

In a partnership, the participants operate under a private agreement among themselves providing for stipulated interests in the enterprise, their respective participation in its profits, and specifying the arrangements between the partners themselves for management, duties, and so forth. There are no officers under the name of *president*, *vice president*, and the like. It is a practice among certain Stock Exchange partnerships,

however, for particular individual partners to receive stated salaries as though they were rated as officers.

A corporation is created by law, existing and operating under a charter which states definite provisions regarding the rights, continued existence as a corporate body, and so forth, of the participants. A corporation is usually a stock company, and if the stock is owned by a number of persons, the matter of legal rights may become widely extended. A partnership has no stock.

A Stock Exchange partnership may be composed of any number of partners beginning with at least two; a number of firms comprise no more than two persons and, from that minimum, present-day organizations extend upward to as many as ninety. Partners are divided into those designated as *general*, and *special* or *limited*. A general partner is liable to the full extent of personal assets for debts of the firm and the conduct of the firm's business; a special or limited partner, on the other hand, has a restricted liability as set forth in the partnership agreement.

General partners carry on the management of a firm; a special or limited partner, under the statutes permitting a limited partnership, in general, may not participate in the control of the business without running the risk of assuming the unlimited liability of a general partner for the firm's obligations.

Under the laws providing for limited partnerships, a person may be both a general and a limited partner. Among New York Stock Exchange firms, a few partners have assumed this double capacity.

COMPOSITION OF MEMBER FIRMS

In the preceding text, mention was made of *allied* members of the Exchange, referring to all partners in member firms who are not themselves members of the Stock Exchange. If the structure of the member firm organization is viewed as of January 1, 1947, these statistics are found:

Members of the Exchange:		Stock Exchange Firms:	
New York City.....	1,187	New York	446
Out-of-town	153	Out-of-town	158
	<hr/> 1,340 *		<hr/> 604

* 35 memberships are held in estates.

Partners in Stock Exchange Firms

Members of Exchange:		Other Partners:	
General Partners	875	General (Allied members) ..	2,268
Special Partners	16	Special Partners	414
General and Special	3	Gen. and Special (Allied members)	17
	<hr/> 894		<hr/> 3,593

In addition to the home offices of the 604 member firms, branch offices are maintained to the number of 898 in 359 cities and towns of this country, in Puerto Rico, Hawaii, and six foreign countries. In numerous instances, branch offices are under the management of resident partners. Although the table shows that member firms are heavily concentrated—so far as home offices are concerned—in the New York metropolitan area, still, close to 25 per cent of them are domiciled in other cities. That they provide countrywide facilities for investors and traders is indicated by the number of branch offices in *some* of the states distant from New York:

California	73	North Carolina	20
Florida	38	Ohio	32
Illinois	61	Texas	22
Michigan	27	Wisconsin	12

In New York, as of January 1, 1947, there were 167 branch offices. Ten were maintained in Canada and 7 in England, 2 in Switzerland and 1 each in Cuba, Holland, and Venezuela. It will be noted that there was no office in Paris or elsewhere in France—Paris was served by several offices before the war—and this situation is accounted for by postwar unsettlement and restrictions upon the use of capital abroad. In Holland, too, New York Stock Exchange service was extensive, prewar, and by this is meant *direct* service. In early 1947, the purchase and sale of Stock Exchange securities for various countries was conducted through member firms by means of correspondent relationships abroad.

FORMATION AND ADMISSION OF A MEMBER FIRM

When two or more persons decide to form a member firm partnership, one at least must, of course, be a member of the Exchange. The kind of brokerage or dealer business the firm decides to transact is settled upon and a partnership agreement is drawn up. This agreement is then submitted to the Exchange authorities and the procedure is thereafter guided by these authorities.

Along with the agreement are filed the names and histories of the prospective partners. The amount of available capital is specified. In the case of a firm intending to do a general commission business with others besides members and member firms, a minimum capital of \$50,000—excluding the amount which the Stock Exchange membership or memberships may have cost—is required in cash or securities. Such securities as are included in the capital are appraised at 70 per cent of the market price.

The Exchange requires that capital at all times shall equal at least one

fifteenth of total liabilities, which include the free credit balances of customers. The Exchange provides that an examination may be made of a member firm's capital position in relationship to its liabilities at any time; it requires, furthermore, that an independent audit of a firm's accounts shall be made at least once a year and the results reported to the Exchange.

The Exchange, with the proposed partnership agreement in hand, undertakes a considerable inquiry, not only into the applicant's program but into personalities as well. Each proposed partner is investigated—again character and a record of past activities figure as in connection with an applicant for membership on the Exchange. When capital and personalities are found to pass muster, the firm is authorized, and the facts surrounding the enterprise become a part of the huge record of member firms which the Member Firm Department files contain.

The admission of a new firm constitutes merely the beginning of the Member Firm Department's contacts with it. Thereafter, a constant supervision of audits and occasional special examinations of the firm's position are maintained. Persistent alertness is in evidence, heightened during periods of unusual price fluctuations of listed securities. The duty of acting as the Exchange's rule enforcement officer is only one of the many duties of this department. The Department is frequently called upon by member firms to adjudicate and interpret the rules in respect to a firm's dealings with other firms and the public. It must keep constantly in touch with the trends of business on the floor. It stands, often, as a buffer between member firms when business disputes arise over the application of rules of trade.

If a member firm receives an exceptionally large selling order from a customer, which appears as though it can be carried out only through a special offering, it is the Member Firm Department which conducts a quick canvass of the market to determine the state of the demand. With the aid of governors on the floor, the department decides whether a special offering will be required or not. A procession of questions in regard to rules and procedures flows daily into the department, requiring decisions based upon thorough knowledge—decisions which are essential to maintain the frictionless operation of the complicated mechanism of the Stock Exchange.

MEMBER FIRM CHARACTERISTICS

The *commission house* is the type of member firm that investors are most familiar with. This is the firm with which the great bulk of the public's business on the Stock Exchange is transacted: receiving orders in

its offices or over the telephone, filling them, and reporting back to the customer buyer or seller.

Most firms do business with the public, but some do not. The *odd-lot dealer* house transacts business only with other brokerage firms or brokers. In addition, some partnerships engage in outside financial undertakings, in the nature of investment banking, doing commission business more or less as a sideline. The member firm list includes others which feature investment advisory services, including the management of large funds, while their commission business on the floor is subordinate. There are firms whose principal source of income is derived from the retail distribution of securities outside of the Exchange; and wholesale firms, underwriters, which are members of the Stock Exchange partly in order to serve correspondent houses and their customers in distant parts of the country.

Until floor trading dwindled, small firms existed, usually comprised of Stock Exchange members who traded for their own account or acted as floor brokers for commission houses. A group of member firms specializes in bonds on the floor, business in stocks for individual customers being subsidiary. Other divisions and gradations of programs and methods would be found by a close study of member firm activities.

THE COMMISSION HOUSE

Since the commission house is the best known of the species, attention may be paid to the ways in which such an organization functions and how it is manned. Its business ordinarily is limited to executing the orders it receives. With certain exceptions, such a firm takes no part in underwritings and does not take a position in securities because it has no dealer department. At the top of the organization are the partners. The partners (or partner) who belong to the Stock Exchange membership are active on the floor, filling orders telephoned to them from the offices. Other partners have their duties inside the office; perhaps one or more of them are heading up branch offices. If a firm is sufficiently large, it may be that the service to investors is departmentalized, one partner specializing in public utility securities, another in industrials or railroad issues, and so on. A partner may be the head of the research department.

Research and analysis of securities comprise a significant element in member firm activities. So extensive and elaborate has such work become since 1930 that more than 40 firms render the results of research and analysis to clients on a free basis. Previously, similar but more casual service of this type was extended to clients as a matter of course without any charge additional to the commissions received on orders executed. All firms still supply financial and industrial information upon request,

the majority without a fee; but in instances where large departments have been developed for the work, the matter of expense has had to be considered. Hundreds of thousands of dollars are devoted annually by Stock Exchange firms to research, including the employment of engineers and other specialists to inquire into corporate facts in the field.

There are firms, too, which perform custodian service, including the safekeeping of securities for clients, the collection of bond coupons, and so forth.

In a commission house, the closest contacts with customers are maintained by partners and *registered representatives*. The latter operate partly as order takers and partly as salesmen; the distinction between these duties is slight. The registered representative was known for many years as a *customer's man*. A more descriptive title was chosen after the Stock Exchange in the 1930's tightened the qualifications for this class of firm employees, requiring that a searching examination be passed by newly employed individuals, and subjecting persons long filling the functions of specialized work to considerable modern schooling and a training period.

The registered representative is expected to have a considerable knowledge of industry, transportation, and public utilities; of statistical analysis; of current news with a bearing upon the market, as well as familiarity with securities market procedures and his own firm's methods of conducting business. The Exchange's rules regarding the activities of these workers are exacting, requiring thorough cooperation with customers, and making practical the provisions of the Securities Exchange Act which deal with the presentation of corporate information upon which customers may base their decisions in buying and selling. Registered representatives have much responsibility in promoting fair and equitable principles of trade.

A great many Stock Exchange firms carry the accounts introduced by other commission houses, finance the latter's customers' requirements for credit in carrying securities, look after the bookkeeping and the mailing of securities and purchase and sale reports to customers. In consequence, some firms have heavily populated back offices—clerks, stenographers, and so forth—while others, who have clerical and other details handled for them, employ small forces. This concentration of labor grew notably out of the difficult days of the 1930's. Carrying firms share in the commissions of the member firms for which they perform this service.

THE PROGRESS OF A SELLING ORDER

If a transaction on the Stock Exchange be traced from its incidence through to the confirmation of the purchase or sale by a brokerage firm to

the customer, a rather comprehensive view may be obtained of the general operation of both the Exchange and a member firm.

Let the order be a sale order. An investor in Dayton decides that he needs to convert 100 shares of General Motors into cash. He will take the highest price that a bidder is willing to pay at the moment the order reaches the Exchange floor, but, at the same time, he wants to know before putting the order in at his broker's office approximately what General Motors is selling for. At his broker's office—the local branch of a wire house—he asks for a quotation. The partner or registered representative who handles his business asks the order clerk to inquire over the wire and the reply comes quickly back from the New York office that 67 is being bid and $67\frac{1}{4}$ is being asked on the floor of the Exchange.

The New York office received the quote from the floor by telephoning to the Exchange's quotation room; this room is high in the Exchange's building but it is constantly in touch by phone with the 17 posts on the floor where business is being transacted. Within a few seconds after the prospective seller in Dayton asked for the quotation, it is received. The market in General Motors being satisfactory, the seller gives his order.

The order clerk hands the written order to a telegraph operator, it is flashed to the New York office and telephoned to the firm's clerk on the edge of the floor. The order calls for a sale *at the market*—meaning at the best price General Motors will command when the order reaches the crowd at the General Motors post. The clerk flashes his firm's floor member's number on the annunciator board on the wall; the member goes to the clerk, gets the order, and hurries to the post. By that time, General Motors is $67\frac{1}{8}$ bid, offered at $67\frac{3}{8}$, and the last sale, as the floor member sees on the side of the post, was at $67\frac{1}{4}$.

The floor broker desires to do as well for his client as possible. He can follow our instructions—*sell at the market*—by accepting the bid of $67\frac{1}{8}$. On the other hand, having noticed that General Motors is looking firm, as evidenced by the last sale at $67\frac{1}{4}$, he may elect to wait for a little, watching the trend. Should he note that more bids than offers are coming in, he may decide that a slight delay in executing the order may bring his customer an eighth or a quarter more than the current bid. The question of judgment and the feel of the market are attributes of good brokerage. But if the state of bids and offers gives him no hint of possible market action for the ensuing few moments, he says *sold* to the bidder of $67\frac{1}{8}$ and gets the stock off at that price. The contract is completed orally, the members merely exchanging names.

A messenger (a page), of whom there are many on the floor, takes the broker's written record of the sale to the telephone clerk at the floor's edge; the report is phoned to the New York office and transmitted over

the telegraph to the Dayton office, where the order clerk sends to the customer a record of the price received.

If the customer has been watching the stock ticker, or a quotation board in the customers' room, he probably knows just about how much his 100 shares have brought before the report reaches him. That is because a memorandum of the sale, besides going to the firm's New York office from the floor, has also been dispatched by pneumatic tube to the ticker room and sent out over the ticker system into nation-wide distribution.

The customer now has to deliver his stock certificate to his broker—assuming that it is not already in his account at the brokerage office. If he has brought it with him, the partner or registered representative takes it, seeing that it is properly endorsed; but otherwise it must be brought in soon, inasmuch as Stock Exchange procedure requires that deliveries from seller to buyer must be made by early afternoon of the third day after a sale is made.

C. THE SECURITIES LIST OF THE NEW YORK STOCK EXCHANGE

Within the definite and controlled scope of the Stock Exchange List are found the issues of most of the largest corporations, such as American Telephone & Telegraph, General Motors, Standard Oil of New Jersey, Pennsylvania Railroad, and New York Central. Besides, nearly all of the bonds of the United States government are listed there, as well as the bonds of certain foreign governments and their subdivisions in particular instances; and a number of domestic municipal bonds. In consequence, the total of listed corporate shares exceeded 1,775,000,000 in early 1947, and the par value of listed bonds of all classes was upward of \$135,000,000,000.

After the passage of the Securities Exchange Act of 1934, which established general procedures in regard to registering securities issues, considerable agitation arose to permit listing on stock exchanges of such issues as met the requirements of federal regulations alone. The governors of the Stock Exchange declined to accept the idea, affirming the desirability of Exchange investigation prior to listing on that market place as a supplement to law and regulation.

The Board of Governors in 1938 adopted the report of a committee of its own members which recommended that the listing requirements designed over the years should not be reduced or curtailed. The Governors decided:

In the long-range public interest it is obvious that the quality of securities listed on the Exchange should be maintained, and that it is desirable to develop

rather than reduce the Exchange's requirements for the continuing protection of the investing public.

The public has learned to expect that listing on the Exchange implies that certain safeguards have been provided against invalid or easily counterfeited certificates, unauthorized overissuance of securities, publication of uninformative or misleading reports to stockholders, antisocial corporate acts and devices, and scores of other possible abuses. It would be obviously contrary to the interests of investors to discard those policies which are designed to maintain the character of securities listed on the Exchange and to insure that such securities are, in fact, what they are represented to be.

To retreat from a long-maintained process of applying rules and principles would, it was averred, "destroy the hallmark which attaches to a listed security, and part of the incentive to the public to buy and sell on this Exchange." The governors felt that

the Exchange should continue to make its experience in the corporate field available to the Securities and Exchange Commission, and that the Commission make available its experience as to corporate and accounting practices to the Exchange, so that both bodies work in harmony upon the common task of raising the standards of finance and business with a minimum of economic disturbance.

The Exchange's position rested on the Securities Exchange Act itself. Under the law, it was noted, a security could not be registered on a national securities exchange unless the exchange had first approved it for listing and registration.

The Commission has no power under the Act to prevent the listing and registration of a security recommended by an exchange unless the registration statement or some act of the corporation fails to conform to the Act or to some rule made thereunder. *It will thus be seen that the responsibility for determining whether a security should be listed rests upon the Exchange.* The Commission has neither sought nor avowed such a responsibility, and we believe that it is not the desire of the Commission to seek it.

BACKGROUND OF LISTING REQUIREMENTS

In the preceding section of this discussion the gradual growth of the Stock Exchange list from 1792 was referred to without benefit of particular details. It was noted that by 1827 there were only 31 issues of stocks and 8 government state bond issues dealt in on the floor. Then, and for 42 years thereafter, the method of adding new securities to the trading list was highly informal; all that was necessary was for a member of the Exchange to move that an issue be lodged on the floor, and, if the majority of members consented, the stock or bond took its place in the list—to have its name read at the calls and be traded in.

In due course, after organized dealings in securities became well estab-

lished and corporate practices became more refined, there were transfer offices for issuing certificates to buyers (this work was adopted by banks after a while), but stock and bond issues were not registered with any agency until 1869. Ever since that year registry of the number of outstanding shares has made the exact size of a corporation's capital stock a matter of record. Insistence upon registration in 1869 was probably the first rigid requirement put into effect by the Stock Exchange in respect to securities of its list, and like so many processes in the Exchange's evolution the decision grew out of events—this time out of arrant skullduggery.

It has been noted that tremendous speculation occurred while the railroads were being rapidly extended; notably, as a product of the disturbed economy of the war period, 1861 to 1865. The postwar period was accompanied by the inflationary effects of a debased currency—specie payments were not renewed until 1879. Speculative giants of ruthless characteristics were active, some of them being officers and directors of corporations. Sensational *corners* frequently were engineered in stocks, as the history of those times reveals; and, until there should be a precise record of the number of shares outstanding, opportunity existed for an increase of a corporation's shares, suddenly and without public knowledge of the increase, when influential directors found themselves squeezed in their market operations.

That was what happened in a notorious instance, and the Stock Exchange took immediate action. It was required that all stocks should be registered, and that registrant corporations should not register additional shares of a listed issue without authority to do so from the Stock Exchange. This step stood as a milestone marking a stage in the Exchange's increasing insistence upon more and more disclosure and publicity with regard to the corporate affairs of companies whose securities were listed.

HOW SECURITIES BECOME ELIGIBLE FOR LISTING

Before going on to specific procedures in connection with the listing of stocks and bonds on the Stock Exchange, it is worth while to glance at some corporate fundamentals. The fact that the list is relatively small—about 1,150 corporations have their securities on the Exchange, in contrast with upwards of 400,000 incorporated businesses in the United States—indicates that listing requirements have exacting features.

When it is estimated that, at any given moment, the number of existing corporations outside of the list which are eligible for listing is usually less than 200, wonder could arise that the Exchange list is as large as it is. The number of possible future listings seems further limited, at any given moment, by the lack of intention among many eligible companies to apply for listing. The year 1946 witnessed the listing, among many issues, of a

dozen or more stocks which had been previously closely held for a generation or longer by families without enough shares outstanding in the hands of individual stockholders to permit a public market. This was an exceptional year for listings of this or related categories.

To say that, at any given moment, there are no more than 200 eligible companies means that there *never* are more than that number. From 20 to 50 companies see their securities admitted yearly, yet the total of eligibles remains fairly constant. This might seem to be a mathematical paradox until the nature of American corporate business is reviewed.

The answer lies in corporate growth. Eligibility is based upon size of assets, developed earning power, and age, and by age is meant a corporation's history of successful operation. Another essential for eligibility is governed by the breadth of the distribution of a company's securities among individual stockholders. A corporation such as the Ford Motor Company, however large and successful it might be, could not be listed so long as its shares were closely held by a few persons.

A company, lacking one or perhaps all of these requisites at a given date, may attain all of them in two or three or five years through growth. Even casual reading of corporate experience, revealed in initial listing statements, is both impressive and dramatic in many instances; for in them one learns about companies which began 20 to more than 100 years ago, founded on an idea and a few thousands of dollars, and which thereafter enlarged themselves by the reinvestment of earnings.

Since 1941 a notable list of corporations has climbed to a high plateau of assets and earning power. Inquiry would reveal corporations, small and relatively unimportant in the corporate structure in 1941, which, in 1946, reported balance sheets showing greatly increased asset values while income accounts showed largely expanded earnings during the war years. Many companies of this group would appear to have arrived at a stage of listing eligibility. Some have obtained listing. But the Exchange's flexible system for measuring the factors of eligibility takes into consideration boom years as well as the periods of business reaction; allowance is made in Exchange requirements for flush earnings as well as intervals of earnings under normal conditions, and a judgment is shaped by average performance over a considerable period—a longer period in case of an infusion of above-average results than when a normal record of earnings and asset growth is offered.

PHILOSOPHY SHAPING LISTING REQUIREMENTS

There is nothing complicated about the Stock Exchange's attitude toward the listing of securities. In essence, it is this: Investors and traders transacting business in listed bonds and stocks are entitled to all

the germane facts which further judgments in regard to values. These facts are comprised in information about a listed company's assets and earnings, reported in detail and made public frequently.

The Stock Exchange has nothing to do with the establishment of prices for securities on its floor; prices are reached through an auction method participated in by many buyers and sellers. The Stock Exchange, however, assumes a considerable responsibility in respect to the stocks and bonds dealt in. This responsibility does not extend to an appraisal, even an inferential appraisal, of value or worth of securities of the list. It *does* involve the setting of definite standards for the admission of securities to the list, and for the issuance by listed corporations of facts about themselves which investors may use in arriving at their own appraisals of value.

Mention should be made that standards respecting size, earnings records, and so forth, which apply to a new listing are not at all the same as those concerning a security *remaining* in the list. Because the right of stockholders to a market is involved, a security, once admitted, usually remains until declared valueless or until the issuing company should be reorganized. Railroad reorganizations of the 1930's and early 1940's offer illustrations of certain equities being removed from the list.

When it is considered that many corporations have been subject to the provisions of listing requirements for 20, 30, 50 years or longer, investors have available a lengthy record, indeed, of corporate growth and statistical evidences of the results of operations. During the passage of time the provisions have been elaborated and directed toward more and fuller disclosures; and, since 1933, at the Exchange's insistence, independent audits by certified public accountants have attested the correctness of published statistics.

It may be said that the application of the Stock Exchange's philosophy in supporting the foundations of fair and equitable principles of trade has been accomplished despite considerable resistance on the part of some listed corporations and others desirous of getting their securities into the list. There was a time, and not many years since, when balance sheets frequently withheld more salient facts than they disclosed; when income accounts of companies which elected to be vague about the disposal of earnings were not entirely clear reading. But, little by little, the Exchange has convinced reluctant listed companies that publicizing valuable data in regard to themselves was worth while from their own point of view, besides working to enlarge their ownership or creditor following on a stable basis.

Much of this progress occurred before the adoption of federal securities legislation and the establishment of the Securities and Exchange Commis-

sion. In fact, many of the principles and also the items now required for registration of securities under the Securities Exchange Act were based upon New York Stock Exchange listing requirements. Over the years, the Exchange has pressed forcefully for the adoption of sound and consistent accounting principles as the basis for the publication of corporate financial results. The Exchange's philosophy has centered on the axiom that no amount of disclosure is adequate unless based upon a searching accounting procedure.

Parenthetically, the Exchange's quarter-century of campaigning for quarterly reports by listed industrial companies has had this significant result: more than 92 per cent of the concerns now issue reports on operations more frequently than once a year.

WHY CORPORATIONS LIST THEIR SECURITIES

The dominant purpose in listing an issue of common or preferred stock, and bonds as well, is probably the increased marketability which this step generates. A supplement to increased marketability is an enlargement of the number of securities holders. Further, a widely distributed ownership of a corporation's existing securities provides an informed and receptive body of investors when a listed corporation elects to do additional financing through the sale of new shares or bonds—or of refunding bonds when an older issue is to be replaced.

In addition to such practical benefits, listing on the New York Stock Exchange contributes certain intangibles to a corporation. The company receives virtually daily publicity through the publication of the prices of its securities on the ticker and in financial tables of newspapers. The advertisement of a company's name and securities in these media also draws public attention, if indirectly, to the company's products or services. Then there is the matter of prestige—a rating among the financially elect—that accompanies listing on a world market place. The initiative for listing usually lies within a corporation because of one or more of the incentives mentioned.

For the privilege of having its stock listed on the Stock Exchange, a corporation pays a small initial fee of $\frac{1}{4}$ to $\frac{1}{2}$ cent per share, depending upon the number of shares listed, and a continuing fee over 15 years of $\frac{1}{40}$ to $\frac{1}{20}$ of a cent per share. For bonds and other fixed income securities, low fees are arranged by a method different from that used for stocks, the basic fee being 1.2 cents per \$100 principal amount.

LISTING REQUIREMENTS BASED ON CORPORATE DEVELOPMENT

In arriving at some of the more important features of listing procedure, the reader will bear in mind that this section of the text deals with the Stock Exchange of 1947. General references, heretofore made to the

securities list and its growth, have hardly taken into account the refinement of particular processes which has occurred since 1869. Refinement, revision, amplification of the Exchange's regulations applied to listing processes and disclosures which listed companies were required to make have been shaped to a large degree by the evolution of corporate business.

Obviously, the corporation, its structure and accounting methods, of 1947 are more complicated than they were in 1869 and 1890. Fundamental changes have entered into the unfolding of the corporate idea through gradual economic progress and the trend, in recent years, toward simplification of structure. For example, the 1920's brought a tremendous development of the holding company form, applied particularly to public utility concerns. The upswing of income tax rates and heavy estate taxes have in recent years been accompanied by the rise of a distinct class of companies, the family holding company being an example—a group designed to conserve wealth.

The movement away from the long-conventional \$100 par share, resulting in the designation of a share's par or stated value from \$1 to various figures less than \$100—the issuance of a host of non-par stocks—have tended toward a widened ownership of equities, at the same time modernizing the framework of corporations. The splitting of shares has required a fresh examination of the relationship of the number of outstanding shares to earned surplus, book value, and earning power.

The great consolidations of industrial concerns of the 1900's have been continued in the mergers of every year since that decade; and when two or three or a half-dozen companies are brought under a single title, and into a single balance sheet, analytical perplexities have naturally had to be resolved. The convertible bond has necessitated alertness in determining the division point between what might be called ownership and creditor capital.

The evolution of corporate business has made the Stock Exchange's listing procedure more exacting in 1947 than in the simpler intervals of industrial development; yet underlying principles have pretty much remained steadfast. The fundamental obligation laid by the Exchange upon companies admitted to the list is to make adequate disclosure of facts about themselves and to do it with reasonable frequency.

The Exchange follows a flexible pathway toward a decision whether or not an applicant company is eligible for listing. To start with, an applicant must have an earnings record, showing that it has been a going concern for a period of years. Flexibility, with due recognition of surrounding circumstances, at once enters the situation. For example, the Exchange's examiners may be content with an income account covering 5 years. But if years of extraordinary earnings are included, such as dur-

ing World War II, it is probable that up to 10 years or longer may be required.

The Exchange has established no inflexible mathematical formula with respect to required size of earnings or the extent of distribution necessary for listing. It varies with the type of the security, whether it is a bond, a preferred stock or a common stock, and the character of the company itself. In 1944 it was ordinarily expected that a company, to be eligible, should show earnings in excess of \$500,000 a year for at least two years prior to its becoming engaged in the war effort. Since V-J Day increasing emphasis has been placed on postwar earnings and, in the absence of special circumstances, demonstrated net earning power under competitive conditions should be nearer \$750,000 a year after all charges than \$500,000.

As to the extent of distribution of a common stock issue, a broad distribution of over 200,000 shares among 1,500 stockholders is the minimum expected for listing. This standard applies to common stocks whose market value is within the normal medium-price range; in the case of lower-priced issues a wider distribution is required. The character of the market and the price range of a security prior to its admission to dealings are also taken into consideration, along with the distribution figures. The extent of distribution necessary for preferred stocks and bonds differs considerably from that required of common stocks; primarily, such distribution need not be as widespread.

LISTING PROCEDURE

Once Stock Exchange authorities are informed that listing of a stock is desired, preliminary discussions are of an informal character, inasmuch as there is nothing of an official nature under way until the Department of Stock List determines that the company is eligible. In the course of a year, scores of proposals for listing come to the attention of the Exchange; a full understanding of minimum requirements on the part of many applicants results sometimes in the overtures being dropped without prejudice, and without any embarrassment to the applicant.

Included among the companies brought forward are often concerns which, in respect to assets and earning power, stand well inside the minimum status. It may be, however, that the capital structure, from the Listing Department's angle, is too involved—this might be the case with a pyramided holding company, subsidiaries having subsidiaries of their own, and so on—and the company's management is advised about the processes of simplification necessary for a listing. Frequently, such concerns have later applied to the Exchange with decks cleared, and have been admitted in due course of the regular procedure. Other obstacles

may exist before a corporation is ready for a formal listing application; but, whether or not the corporate setup warrants the taking of necessary steps, the preliminary unofficial discussion is entirely informal.

When the Department of Stock List is satisfied that a company is eligible, the applicant receives a copy of a document which is appropriately headed, *The Application for Original Listing of Stock General . . .*, a questionnaire dealing with 21 subjects, each of them covering a phase of the corporation's status in respect to its history, management, capitalization, earnings and dividend record, financial and accounting policies, and so on. After this questionnaire is filled out, the Department of Stock List's examiners analyze the information.

The Exchange employs seven or more examiners, men skilled in collating the information contained in the applications. When all the essential material is in hand, the full staff of the Department of Stock List—examiners, directors, and a vice-president of the Exchange in charge of the Department—determine whether the information is sufficient. If so, a recommendation for listing goes to the Board of Governors, along with copies of the completed application, for action. At times, in connection with an original listing applicant, border-line questions in regard to eligibility arise. In such instances, the Department seeks the advice of a designated group of governors before arriving at a final decision, preceding a recommendation to the full Board.

ESSENTIAL ACTION REQUIRED OF LISTED CORPORATIONS

So long as a corporation's securities are listed on the Exchange, certain obligations are accepted by it before a listing application is passed upon favorably by the Stock Exchange. A long array of agreements are entered into, shaped primarily to keep securities holders, the Exchange, and the general public informed about the activities, earnings, asset position, and so forth, of a listed corporation. Some of these are here quoted:

The Corporation will promptly notify the Exchange of any change in the general character or nature of its business.

The Corporation will not without the prior approval of the Exchange purchase directly or indirectly, any of its securities listed on the Exchange at a price in excess of that at which the securities so purchased might then be obtained in the open market.

The Corporation will furnish to the Exchange on demand such information concerning the corporation as the Exchange may reasonably require.

The Corporation will publish at least once in each year and submit to its stockholders at least 15 days in advance of the annual meeting of such stockhold-

ers and not later than three months after the close of the last preceding fiscal year of the corporation a balance sheet as of the end of such fiscal year, and a surplus and income statement for such fiscal year of the corporation as a separate corporate entity and of each corporation in which it holds directly or indirectly a majority of the equity stock; or, in lieu thereof, eliminating all inter-company transactions, a consolidated balance sheet of the corporation and its subsidiaries as of the end of the last previous fiscal year, and a consolidated surplus statement and a consolidated income statement of the corporation and its subsidiaries for such fiscal year.

The Corporation will publish such periodical interim statements of earnings as it shall agree upon with the New York Stock Exchange. Such interim statements of earnings will show net profits on the basis of the same degree of consolidation, depletion, normal income taxes and interest, estimating the proportionate amount of these items as accurately as may be if not finally determined, and will disclose any substantial item of an unusual or nonrecurrent nature.

The Corporation will publish promptly to the holders of any of its securities listed on the Exchange any action taken by the corporation with respect to dividends or to the allotment of rights to subscribe or to any right or benefits pertaining to the ownership of its securities listed on the Exchange; and shall give prompt notice to the Exchange of any such action; and shall afford the holders of its securities listed on the Exchange a proper period within which to record their interests and to exercise their rights; and shall issue all such rights in form approved by the Exchange and will make the same transferable, payable and deliverable in the Borough of Manhattan in the City of New York.

The list of agreements is here much abridged. The full list may be found included in listing applications of corporations which, printed in detail, are available at the New York Stock Exchange.

REVIEW QUESTIONS

1. With reference to the New York Stock Exchange, answer the following:
 - (a) Explain briefly what the NYSE is and how it functions.
 - (b) What is the total of the present memberships?
 - (c) What is an "allied" member?
 - (d) Name some of the important changes which took place in the government of the Exchange in the reorganization of 1938?
2. With reference to the floor layout of the NYSE, answer the following:
 - (a) What is a "post" and what is its function?
 - (b) How are "members" notified that they are wanted on the telephone?
 - (c) What is meant by the "crowd"?
3. Define the following terms:
 - (a) Auction market.
 - (b) Negotiated market.
4. Describe the work done by each of the following:
 - (a) Specialists.
 - (b) Floor traders.
 - (c) Floor brokers.

(d) The bond crowd.

5. What is the rule of procedure regarding "short" sales.

6. What are the more important customer services usually offered by a commission house?

7. State the requirements for qualification as a "registered representative"?

8. Trace the steps in a transaction on the NYSE from its incidence to confirmation of purchase or sale by the brokerage firm which receives the order from a customer.

9. Describe briefly the requirements for listing a security on the NYSE.

10. What are the advantages and disadvantages to a corporation in listing its securities on the NYSE?

11. What fees are charged a corporation for listing?

12. What are the duties which fall on a corporation in order to keep its securities listed?

13. What is a "special" offering? What are the conditions which cause them? How are they handled?

THE OVER-THE-COUNTER MARKET

by Raymond Trigger, *Managing Editor,*
The Investment Dealers' Digest

THE TERM *over-the-counter* market is a misnomer. So are the expressions *unlisted market* and *off-board market*. All apply to the same thing: the processes, places, and people involved in all securities transactions that take place without benefit of the facilities of an organized stock exchange.

The president of the National Securities Traders Association has proposed that this huge market be called the *National Securities Market*. While obviously an improvement, it hardly fits the bill, since transactions on the New York Stock Exchange originate in every city of the nation; the proposed expression probably implies an exclusiveness that does not exist.

For the purposes of this article we shall use *over-the-counter*, since that is the most popular term, by a wide margin, for the market we are about to examine. Because this subject includes a number of varied activities, some of the ground we shall traverse will have been previously covered, more thoroughly, in other chapters in this book.

In discussing various aspects of this market, it will be convenient usually to use corporate securities as an example. It should be emphasized, however, that the purview of over-the-counter activities is by no means restricted to industrial corporations.

Virtually all transactions in municipal and state securities—distribution and trading—are conducted over-the-counter. It is through over-the-counter facilities that cities sell bonds to finance roads, hospitals, housing projects, and so forth. United States government bonds are listed on the New York Stock Exchange, but the bulk of all transactions takes place over-the-counter.

World Bank bonds were, of course, wholly distributed over-the-counter; they have been listed, but, like Treasury bonds, the real market is elsewhere. Real estate bonds and stocks, bank and insurance company

stocks, railroad equipment trust certificates, local securities, most investment company securities, all have their main markets over the counter.

THREE FUNCTIONS

There are three major functions of the investment business:

1. Origination of securities.
2. Distribution of securities.
3. Maintenance of marketability.

The role of the stock exchanges of the nation is principally that of maintaining marketability. The scope of over-the-counter business embraces all three activities. (However, the fact that a security is listed, or that listing is contemplated, is sometimes set forth as one of the desirable attributes of a security in which transactions are effected over the counter.)

The financial history of hundreds of the nation's best-known corporations has been the same:

1. A man, or group of men, starts a business. It prospers. In order to acquire facilities for handling an expanding volume of business, or in order to finance such additional business, the need arises for more capital.

2. Through the efforts of a local investment dealer, shares in the business are sold to a number of local citizens.

3. In order to create a widened interest in the business and its securities, and perhaps with an eye on the possible need for further, future financing, the investment dealer is given an opportunity to buy part of the holdings of one or more of the officers of the company. Being thus in a position to make delivery if demand for shares should exceed supply from other, local holders who might wish to sell, the dealer disseminates information about the company to dealers in other cities. He issues literature, advertises, provides data about the progress of the company. If he is sufficiently enthusiastic about the prospects for the company, he makes personal calls on dealers in other cities. He maintains *firm markets*: meaning that he has stock for sale, and will purchase proffered stock, in any reasonable quantity.

4. Dealers in other cities view the prospects for the company with interest. Satisfied that the possibilities justify investment on the part of their customers, they undertake to *retail* the stock. They *trade* in the stock also, not only to buy and sell stock as dictated by the requirements of their salesmen, but perhaps for trading profits additionally.

5. With the passage of time, the company shows continued growth. The stock has become widely known in the over-the-counter field; a

reasonable degree of acceptance of the name has been created among investors. The time has come to acquire new, important capital for expansion, or perhaps for acquisition of competitive businesses. Financing of such expansion is discussed with the local dealer.

6. Realizing the value of nation-wide distribution of the contemplated new securities, and realizing the character of the specialized underwriting and distributing facilities that have been created by some of the larger firms in the country's financial capitals, the local dealer *brings the business* to one of the latter firms.

7. Nation-wide distribution of the company's securities takes place, accompanied by nation-wide advertising.

8. Trading houses *make a market* in the stock. If there are a sufficient number of stockholders and a sufficient degree of activity, the National Association of Security Dealers will add the security to the list of those over-the-counter securities on which quotations are supplied daily to news services.

It should be quickly pointed out that, while the above is an exact description of the financial processes whereby hundreds of local enterprises have grown into nationally known corporations today, many details have been omitted. Observance of the requirements of the Securities and Exchange Commission, for example. Also, it should be noted that in many cases, as soon as the required number and distribution of stockholders has been reached, application is made for listing of the securities on a *regional* stock exchange and ultimately, perhaps, on the New York Stock Exchange and New York Curb. Further along, we shall have a brief look at the pros and cons of listing.

Sometimes a corporation endeavors to sell securities direct to the public. Such selling often carries a pretty strong implication that no responsible security house is willing to identify itself with the issue, that is, to lend its name as endorsement of the enterprise.

In the above thumbnail history, origination, distribution, and maintenance of marketability have all played a role.

ORIGINATION

Origination of securities takes two primary forms:

1. Creation of securities not previously issued by a corporation.
2. Creation of new securities that represent either *additional* financing by a corporation or *replacement* (refunding) financing.

The initial issuance by a corporation of securities to the public may be handled in several ways.

As in the example given above, the securities may be placed entirely with local investors—through the efforts of a local over-the-counter dealer. Many textile stocks of the South, brewery stocks of Missouri, manufacturing stocks of Connecticut, for example, first enlisted public participation in ownership in that manner. .

Or, perhaps the securities dealer handling the financing for the corporation may seek wider-spread ownership (geographically) at once. This is usually difficult of attainment on small offerings, but there have been many recent offerings where such distribution was sought. A considerable percentage of these offerings has been of *promotional* character. (Before V-J Day the Department of Labor compiled a list of 839 scientific and technological developments that "will help build a prosperous post-war era." We are witnessing many security offerings emanating from business brought into being, or expanded, through commercialization of these "developments.")

As contrasted with offerings originating from one-step-at-a-time plans of new or growing corporations, some initial financing is planned in an attempt to create at once an enterprise of national stature. Recent examples have been Kaiser-Frazer and Tucker Corporation.

Elsewhere in this book has been presented the story of the work involved in setting up new financing—the engineering, the research, the market surveys, the statistical work, the conferences with corporations to agree upon proper pricing, terms, and timing.

COMPETITIVE BIDDING

Not all underwriters of new security offerings are selected by negotiation between underwriter and corporation. The following types of issues are put up at auction, the firm offering the most favorable terms being awarded the business:

1. Municipal issues in most states.
2. Railroad equipment trust certificates.
3. Railroad bond issues (unless exemption is granted by the Interstate Commerce Commission).
4. Public utility issues of those companies coming under the aegis of the Securities and Exchange Commission under the Public Utility Holding Company Act (unless exempted by SEC).

The question of whether or not the interests of corporation and the investing public are best served by abandoning the traditional company-investment banker relationship and substituting competitive bidding therefor, on public utility and industrial issues, has been one of the most

hotly contested points in the investment business during the past few years.

DISTRIBUTION

Where an offering of new securities is of small aggregate dollar volume, origination and retail distribution frequently are effected by a single firm. The machinery of distribution of most issues, however, looks something like this:

1. *Underwriting Manager*: This is the firm (a) that has negotiated with the issuing corporation in setting up the terms of the financing; or (b) whose organizing facilities have been enlisted by a smaller firm which has been the original contact with the corporation; or (c) that has, in competitive bidding financing, taken the initiative in forming a group of underwriting participants. In most instances, underwriting managers also engage in retailing, although there are a few firms whose activities are virtually pure underwriting.

2. *Underwriting Participants*: These firms are invited by the underwriting manager to share in the underwriting. The purpose is not only to reduce the individual liability of the underwriting manager but also to insure success of the offering by taking advantage of the capacity of other firms for (a) retail distribution and (b) enlisting the retailing facilities of still other firms who may be influenced to enter the selling group. (As a practical matter, it should be observed that preliminary indication of interest on the part of prospective buyers in some offerings is so pronounced that an invitation to join a selling group is equivalent to a grant of profit.)

3. *Selling Group*:¹ These firms do not receive as large a concession from the public selling price as do underwriting participants. As an offset, their liability is limited only to possible depreciation in market price on those securities which they have requisitioned and been allotted. (Selling group members are not always allotted the full number of securities requisitioned—particularly on *fast* deals.)

The most important difference between listed and over-the-counter business should be observed at this point.

The advertising legend of brokers is "We execute orders in all markets." The burden of the story of over-the-counter dealers is "We offer . . ." That, essentially, is the entire difference. A broker accepts orders for

¹ On municipal bonds, there is no selling group. Practically all municipal and state bonds are sold by competitive bidding. The members of the winning group usually retail the bonds without benefit of a selling group, although it is usually customary to advertise a concession to other municipal bond retailers.

execution; a *dealer sells* (and buys). Of course there are many exceptions when a dealer acts as a broker executing orders in the over-the-counter markets on an agency basis, and being compensated for so doing by a commission, or agency fee.

In England new issues can be launched on the London Stock Exchange. Under our existing financial machinery, that is impossible. The entire responsibility and opportunity for serving as liaison between companies which need money and investors with surplus funds is vested in the over-the-counter investment fraternity.

It should be carefully noted, however, that many members of the New York Stock Exchange (and other exchanges) have important over-the-counter departments—underwriting, investment sales, or trading (usually all three).

Distribution does not always consist of new securities of a corporation. *Redistribution* in the form of *secondary* offerings is an important factor in the business. Secondaries arise from the following sources:

1. A large individual stockholder will wish to sell part of his holdings. This might be desirable for several reasons: (a) to widen public ownership; (b) to establish marketability for his securities, in behalf of heirs, in the event of death; (c) to establish a capital gain rather than draw more income (more highly taxable) from the company; (d) to ensure perpetuity of the corporation.

2. An institutional holder—trust company, insurance company, investment trust, for example—may wish to dispose of a block that is too large to offer on the Stock Exchange (if the stock is listed, which is frequently the case) without depressing the market price.

3. Under the Public Utility Holding Company Act, many public utility holding companies have been obliged to divest themselves of stock holdings of operating utility companies. The privilege of offering these secondary redistributions has usually been acquired by competitive bidding.

PRIVATE PLACEMENT

The trend toward *private placement* of securities, via investment bankers, direct to one or to a small group of insurance companies (and, less frequently, to other types of institutional investors) has been strongly upward. It has been a cause of considerable concern to investment houses who have thereby been denied the profits of underwriting and of retail distribution. Likewise, smaller insurance companies whose capital does not permit the outright purchase of an entire, sizable new issue, have been bitterly critical of the larger companies which have “gobbled up luscious new issues” in their entirety. Among the reasons why this type

of placement has been attractive both to issuer and to investment banker has been the fact that onerous and costly SEC registration and restrictions are avoided.

MAINTENANCE OF MARKETABILITY

It has been estimated that there are as many as 25,000 individuals engaged, regularly or occasionally, in over-the-counter trades. There are approximately 3,700 members of the National Security Traders Association. The primary purpose of that organization is to promote the welfare of those engaged in over-the-counter trading and to expand its usefulness to the investor and the businessman.

Included in membership are men and women engaged in various activities. Some are purely traders, that is, they buy and sell securities usually only from other traders, dealers or banks. They engage in no business transaction direct with the public. Some devote the major part of their activities to specialties, such as bank and insurance stocks, public utility stocks, real estate securities, bonds of reorganized railroads, municipals, government bonds, and so forth.

Some trading firms deal in many classes of securities. Where a sizable volume of business is done, it is customary to have specialists trading in each class. Thus, one firm might have men at the trading table among whom are specialists in public utility preferred stocks, industrial stocks, industrial bonds, new issues, general market municipals, Southern Municipals, and so forth.

Another type of trader is the man whose activities consist primarily in *servicing* the retail sales department. Perhaps a simple example will help clarify this. In North Carolina, the preferred stocks of Carolina Power & Light are to be found among the investment holdings of thousands of Carolinians. Many transactions—initial purchasers, additional purchases, or sales—take place daily. Business conducted by the retail salesmen of investment firms in Charlotte, Greensboro, or Raleigh, for example, includes almost daily transactions in Carolina Power & Light preferred stocks. In order that sales may be confirmed, by salesman to investor at an agreed-upon price, it is essential (a) that the trading department either have shares of Carolina Power & Light preferred stock on hand, or else know quickly where to buy them at a price pretty well known in advance, and (b) that the retail salesman be in continual contact with the trading department to know what he can sell or buy and at what prices.

TRANSACTIONS IN LISTED SECURITIES BY OVER-THE-COUNTER DEALERS

In some cases where interest is widespread, it is necessary for over-the-counter firms, in the interest of providing adequate service to customers,

to engage in transactions in listed securities. These are not always profitless:

1. Some firms, on orders from their customers, will buy a designated listed security as a principal, then resell at a mark-up in price. So long as the confirmation form to the customer indicates clearly the character of the transaction, and the mark-up is not excessive, this is not frowned upon. But despite the fact that such practice can frequently be rationalized (by investment counsel service rendered, for example), it is, as a practical matter, difficult to induce investors to pay more for a security than would be the cost if purchase were executed by a brokerage firm. On the other hand, some over-the-counter firms whose ethical standards are very high have educated their customers to accept surcharges without question.

2. Some over-the-counter firms which, in the normal course of their business, have a sizable aggregate of orders in listed securities, effect reciprocal arrangements with listed firms to whom such business is entrusted. They may receive valuable statistical services. Or they may receive over-the-counter trading business (since brokerage houses usually receive from their customers a sizable volume of orders in over-the-counter securities).

3. In many cases an over-the-counter trading market exists side by side with a listed market in the same security. Sometimes trading on the exchange, on a given security, is *thin* (that is, small volume) and a more realistic market exists off-board. This is particularly true in the case of some securities listed on the smaller regional stock exchanges. It is true, also, of some securities listed on the New York Stock Exchange, such as railroad bonds, several bank and insurance stocks, United States Government bonds, and World Bank bonds, for example.

An interesting example of an over-the-counter market and a listed market existing side by side, is afforded by the stock of Coca-Cola. There is tremendous local interest in the stock of Coca-Cola in Atlanta. One investment firm there has traded over the counter a number of shares, in one year, equivalent to 25 per cent of the entire trading volume in that stock on the New York Stock Exchange in the same year.

We have noted that members of the National Security Traders Association include *wholesale* traders and traders whose primary function is servicing a retail staff.

Additionally, the membership includes many individuals who manage the investment departments of banks. These departments bid on new

state and municipal bonds offered for sale; they also buy and sell (trade in) outstanding state and municipal bonds.

A very important additional segment of the traders' fraternity includes men identified with the over-the-counter trading departments of New York Stock Exchange firms. The revenue from the over-the-counter business of some member firms exceeds its revenue from listed transactions, although that is the exception rather than the rule. In the annual report of Merrill Lynch, Pierce, Fenner & Beane, the nation's largest *brokerage* firm, a breakdown is shown of gross income; it shows that 15.2 per cent of the firm's revenues were derived from over-the-counter business.

Coincidental with the distribution of a new issue of securities, many trading firms advertise that they are prepared to buy and sell these securities. As long as those securities are in the hands of the public, and unless they become listed (in which case, as has been pointed out, over-the-counter activities do not always necessarily suspend), the trading fraternity includes some who are always ready to buy and sell virtually any given security.

Another important activity of the trading department is the trading in rights. Almost every expanding corporation has issued rights at least once during its business career. The practice is particularly widespread during periods of general prosperity. The establishment of a market for rights is of considerable value to stockholders who prefer to get the cash value of their newly acquired rights rather than exercise them.

OVER-THE-COUNTER QUOTATIONS

Hundreds of thousands of dollars, perhaps millions, are spent annually by trading houses in the preparation of literature describing securities in which trading is active or in which certain houses may wish to engender more active interest.

Their bid and asked prices on the more active securities are quoted every day in the National Quotation Bureau sheets. On an average day in 1947, approximately 7,800 securities (5,300 stocks and 2,500 bonds) were quoted in the sheets by approximately 1,800 firms. In an average year, as many as 25,000 different securities have been quoted in the sheets. (There are about 3,000 securities listed on all U. S. stock exchanges.)

That widespread publicity may be given to current market prices on over-the-counter securities, the National Association of Securities Dealers has set up facilities for supplying quotations to the press. The *Wall Street Journal* and other financial publications now devote a regular daily section to quotations on over-the-counter securities. Once a week, quotations appear on more than 900 securities; daily quotes are provided

on approximately 425 securities. The *New York Journal of Commerce* presents daily quotations on some 1,400 over-the-counter securities.

Another step being taken by the National Association of Security Dealers to ensure adequate dissemination of information to the public, on the fiscal affairs of companies traded in the over-the-counter market, concerns dividend declarations.

All of this buying and selling, willingness to buy and sell, and publicizing of market prices, adds up to the creating of marketability. It is one of the most vitally important contributions of the over-the-counter segment of the securities business to the economy of the nation. For unless securities can be converted into cash by an investor, with a reasonable degree of speed and convenience, he will hardly be ready to buy the securities in the first place; if securities cannot be sold, financing of worthy enterprises may encounter difficulties or costs that vitiate plans for expansion.

LISTED VERSUS OVER-THE-COUNTER MARKETS

When a security is listed, all efforts to sell the security, theoretically, stop. The basic function of a broker is to execute orders for which the initiative stems from the buyer.

When transactions in a security are effected over-the-counter, however, salesmanship (and sponsorship) comes into play.

It follows that securities eligible for listing are those with widespread ownership and with trading activity of such degree that a sufficient volume of voluntary transactions take place to establish a true market place and market price.

Thus, the over-the-counter market (and, to a large extent, regional stock exchanges) are regarded as seasoning grounds for ultimate big-board listing. Here facts are disseminated, financing is effected, initial distribution and re-distribution of a corporation's securities take place, marketability is established.

Not all corporations whose securities become eligible for listing seek it. Insurance companies, banks, and other financial institutions do not welcome a public record of transactions in their securities. Some corporations refrain from listing for the alleged reason that, due to the information called for by the Exchange from companies listed thereon, trade secrets will be revealed to their competitors.

An excellent example of the essential difference in technique between listed and over-the-counter markets is afforded by the process of secondary offerings of listed securities.

Sometimes a holder of a large block of a listed security wishes to sell at once. The seller may be an investment company, an insurance com-

pany, a trust company, or a large individual stockholder. The size of the block, compared with the size of the normal amount of shares sought for purchase on any given day in the Exchange, is such that liquidation could not be effected quickly without unduly depressing the market price.

In these circumstances, the New York Stock Exchange (and several other exchanges) permits sale over the counter. Member firms and non-member firms invite both member and nonmember firms to participate in distribution at a fixed price and with a fixed selling commission (always greater than would have been the brokerage fee had the stock been sold via the Exchange). Thus, selling effort is placed behind distribution of the block. The record is impressive of successful liquidation of large blocks which could not have been liquidated on the Exchange except through days, or perhaps weeks, of *feeding out* of stock in keeping with the capacity of normal Exchange orders to absorb.

CURRENT PROBLEMS

One of the most vexing problems of the over-the-counter business deals with restrictions that have been imposed by the Securities Act of 1933 on the dissemination of information in connection with new issues about to be offered. The administration of the SEC has been not unsympathetic to the position of underwriters, retailers, and traders in this regard and has pressed for amendments that may eliminate some unfair (to investment man and public alike) restrictions.

Another problem which some dealers believe requires re-examination is the matter of what constitutes a fair price mark-up. The essence of the problem is that the investment dealer, when acting as principal, frequently acts both in the capacity of merchant (retailing securities) and professional man (investment consultant and advisor).

Many professional men—for example, lawyers and physicians—charge in accordance with the capacity of the client to pay. Obviously, such basis for charge would be impossible in this case. The basis, therefore, usually employed is that of a percentage of the gross sale—sufficient to compensate for the dual role of the dealer. But this frequently brings about charges which, on the surface, appear to be out of line.

Dealers are not averse to showing their profits—except that they feel that, of all businesses and professions, they should not be singled out for the imposition of such an obvious handicap to selling.

The National Association of Securities Dealers, in a memorandum to its members defining *fair and equitable principles of trade*, has indicated that a retail selling price equivalent to a 5 per cent mark-up over current "inside" (that is, wholesale) market price be usually regarded as a maximum. Save in very exceptional cases, the mark-up policy of repu-

table firms acting as a principal is considerably below that 5 per cent ceiling.

THE OUTLOOK

In 1937, the National Resources Committee selected nine industries as most likely to arise from new inventions: air conditioning, artificial cotton and wool, synthetic rubber, plastics, the photoelectric cell, prefabricated houses, television, facsimile transmission, and tray agriculture.

On December 8, 1941, the day after Pearl Harbor, every one of those industries sprang to battle stations. The role they played in bringing this nation to the greatest peak of industrial production in all the world's history is well known.

But, as in hundreds of research laboratories inventive genius was harnessed to the needs of war, a tremendous impetus was given to the development of new products to serve America at peace.

Investment banking—particularly in those functions of the profession which we have examined here—will play an indispensable role in assisting in the development and marketing of these products, in the creation of new industries, and in the providing of employment for millions.

As one looks down the list of securities being traded today in the over-the-counter market, a good number of speculative issues will be found. It should be borne in mind that a majority of the blue-chip corporations of the United States, many of whose bonds, preferred stocks, and common stocks are among today's top investment credits, were, at the time of original incorporation, highly speculative. Such giants as United States Rubber, Texas Gulf Sulphur, Homestake Mining, and Westinghouse Air-brake are typical.

Some of the new names in today's investment picture may well forge ahead even if the nation's economy as a whole should slump. In 1937, industrial activity in the United States as a whole slumped 26.8 per cent. One industry, however, an infant industry whose possibilities were not fully foreseen even then, boasted an increase of more than 50 per cent: air conditioning.

Buying departments and syndicate departments will carefully screen those companies whose securities appear to be eligible for public offering. They will ascertain whether the sales market is capricious, whether sales are dependent upon the stimulant of some new fad. They will inquire as to the sources of supply, the character of competition, labor problems. They will ascertain whether the fortunes of a company under review are subject to government fiat or to legislation.

Once a company's securities have passed muster and have been distributed to the public, the trading departments will take over to dissemi-

nate information and create widened acceptance and ownership. A St. Louis firm saw possibilities in the New England textile firm of Berkshire Fine Spinning; through their efforts, hundreds of new stockholders were created in the Middle West. A firm in New York became interested in the bonds of Seaboard Airline Railroad at a time when ownership of those bonds was almost primarily concentrated in the South; today there are several thousand bond holders in the North. A Los Angeles firm became interested in the securities of Boston Elevated; the stockholders' list will now show a surprising percentage of shareholders on the Pacific Coast. And so it goes. Hundreds of examples could be quoted of the job trading departments have done in reaching out for new opportunities for the investment public and for widening the public ownership of deserving corporations.

REVIEW QUESTIONS

1. Give examples of the more important types of issues normally traded "over the counter" rather than on a stock exchange.
2. What is the general pattern of the financial history of hundreds of the nation's best-known corporations?
3. By what methods may the initial issuance of securities by a corporation to the public be handled?
4. What types of issues are usually offered under competitive bidding?
5. How do secondary offerings originate?
6. What is meant by "private placement of securities"? What are its advantages and disadvantages?
7. How is marketability maintained for the over-the-counter securities?
8. How can an over-the-counter firm realize profits by engaging in transactions in listed securities?
9. How are over-the-counter securities publicized to maintain an active market?
10. What are some of the current major problems facing the over-the-counter market?

GOVERNMENTAL REGULATION OF INVESTMENT BANKING

by David Saperstein, Esquire, of Silver & Saperstein; formerly Director, Trading and Exchange Division, Securities and Exchange Commission

A. INTRODUCTION

Prior to World War I, the United States was a debtor nation which had raised substantial amounts of long-term capital through the flotation and sale of securities abroad. With the transformation in its status from debtor to creditor nation, the trend of financing was reversed. Funds required, not only for domestic purposes but by foreign governments and industries, were more and more frequently raised by the distribution of securities in this country, and the practice developed of selling securities directly to the American investor. This practice, which many believe to have originated in the federal government's method of financing during World War I, stimulated the growth of the modern machinery of securities distribution.

ROLE OF THE INVESTMENT BANKER

The investment banker is the intermediary between the issuer of securities and the investing public. His primary business consists of purchasing whole issues from governmental units or corporate issuers and distributing them to institutional and individual investors. A secondary feature of his business consists in effecting the transfer of controlling blocks of outstanding securities from the holders thereof to the general public or to specific persons desiring to succeed to the control of the issuer.

New capital required by corporations and governments is obtained in enormous volume through the medium of investment bankers. The great bulk of all bond issues, except United States Government issues, is sold through them. Investment banking firms are often referred to as *bond houses* for the reason that their activities at one time characteristically centered around the purchase and sale of bonds. During the decade fol-

lowing the end of World War I, however, there was a marked increase in financing by means of stock issues, and the activities of investment banking houses were expanded to include the underwriting of such issues. Since then, it has become common practice for these houses to engage in the distribution of stocks as well as bonds. The services of the investment banker are sometimes dispensed with in connection with the issuance to existing stockholders of rights to subscribe for additional stocks; but even in the case of a rights offering, an investment banker may be retained to take up and distribute the unsubscribed portion of the issue.

The operations of the investment banker and the commercial bank are comparable in the sense that both gather up little rivulets of savings and place them at the disposition of enterprises which can employ them profitably. The functional distinction between the two resides in the fact that the commercial bank normally makes short-term advances to borrowers for current business purposes and holds the borrowers' paper, whereas the investment banker deals in negotiable securities representing long-term advances and distributes such securities to the investing public.

The functions of the investment banking houses are essentially different from those of the organized exchanges. On occasion, confusion has been engendered by the claim that transactions on exchanges provide industry with capital. The fact is that capital is supplied to industry chiefly through investment bankers, the exchanges playing no direct part. The exchanges provide the media for the transfer of ownership after the investment banker has originated the securities and has distributed them to the investing public; but before a security is eligible for trading on an exchange it must have adequate public distribution. Activity on the exchanges is concerned almost exclusively with securities which are already outstanding.

The contribution made by the organized markets to the financing of industry is of a secondary and indirect nature. The investor, in seeking a repository for his savings, insists that whatever form his investment takes, it be readily and promptly convertible into cash at a price which involves a minimum of sacrifice. Unless it possesses this quality of liquidity, a security is regarded as having but little appeal for the investor. The exchanges, by providing a market for securities after their original distribution, enhance the liquidity of securities in the eyes of investors and create in the buying public a willingness to invest in new issues. Thus, in the performance of their primary function of facilitating the shifting of ownership of outstanding securities, the exchanges make an indirect contribution to the process of distributing new securities. In the final analysis, however, the main burden of supplying industry with new capital rests upon the investment banking organization.

The distinction between the investment banker and the broker and dealer should also be borne in mind. The *broker* characteristically engages in the business of effecting transactions in securities for the account of others. The *dealer* characteristically engages in the business of buying and selling securities for his own account, through a broker or otherwise. In contrast with the investment banker, neither the broker nor the dealer, as such, plays any part in the origination of issues. In modern practice, many brokerage houses maintain bond or investment departments through which they perform the dual functions of brokerage and investment banking, just as firms which are primarily investment bankers also engage in the brokerage business. Functionally, however, there is a clear distinction between the investment banker, who stands between the issuer and the investing public, and the broker or dealer, who stands between the seller and the purchaser of outstanding securities.

In relation to the *issuer*, the investment banker assumes a role which implies graver responsibilities than that of a mere purchaser of securities for resale. He generally performs the functions of financial adviser to the issuer, passing upon important questions of policy, such as the type of security to be offered, the yield, the collateral, if any, to be furnished, the timing of the offering, the price to the public, the spread, and so forth. Through stock ownership, representation on the board of directors, contractual arrangements, or otherwise, he may exert a controlling influence over the affairs of the issuer. His association with the issuer is likely to be continuing in character.

As respects the investing public, the investment banker also takes a position more intimate than that of the ordinary merchant. The banker who sponsors an issue is presumably in a superior position to appraise its merits. The name of an important banking firm attached to a prospectus is a potent factor in inducing the public to invest in the security. The public assumes that a reputable firm will not lend its name to a piece of financing without adequate investigation and the exercise of an informed and expert judgment. Many firms recognize that in sponsoring an issue they assume a quasi-fiduciary relation toward the investing public which survives the initial distribution and endures as long as the security is outstanding.

The responsibilities which the investment banker assumes toward the issuer are sometimes difficult to reconcile with those which he assumes toward the investing public. The problem is further complicated by considerations of self-interest—the natural desire of the investment banker to show a profit in his business operations. Prior to the 1920's reputable firms were fairly successful in maintaining a reasonable balance between the interests of issuers, the interests of security buyers, and their own

interests. It was generally recognized that the maintenance of high standards in the selection of securities for public distribution was essential to the reputation and continued existence of the sponsoring firm. It was also recognized that from the long-range point of view, the welfare of an issuer was not promoted by the issuance of securities on an unsound basis.

ABUSES OF THE PAST

The 1920's witnessed a radical change in the public taste for securities. The trend toward nonequity financing was sharply deflected. The channelling of capital to industry was accomplished in ever swelling volume through the medium of common stocks. Such securities whetted the speculative appetite of the public by affording opportunity for participation in the enhancement of equity values. Common stocks replaced bonds as the popular medium of investment and were sold to individual buyers with far greater ease. Many large corporations seized the opportunity to meet their new capital requirements and to refinance their existing indebtedness through offerings of common stocks rather than bonds. At a time when the volume of funds seeking investment was mounting to record proportions, the supply of high-grade bond issues was diminishing.

Responsive to the pressure of popular taste during this period, many investment banking firms abandoned their traditionally conservative policies in the origination of issues. Unsound and unseasoned securities, issued by domestic and foreign corporations and by foreign governments, were sponsored in huge volume by reputable houses. Issues were frequently originated without adequate investigation, without the application of any proper standards of investment appraisal, and without provision for the most elementary safeguards to the investor. All too often, distribution was facilitated by the misstatement or concealment of material facts in the offering circulars and other selling literature. The abuses which sprang up and flourished during this period were thoroughly documented by the United States Senate Committee on Banking and Currency in the course of its investigation of stock exchange and banking practices made between March 1932 and June 1934.

For these widespread deviations from conservative investment banking practice, various justifications have been attempted. Most frequently it has been urged that the fault lay with the investing public; that the public appetite for speculative securities was insatiable during the boom years; and that the investment banker, like every other type of merchant, must stand ready to satisfy the prevailing demand if he is to remain in business. The argument leaves out of account the semifiduciary nature of the relationship existing between the investment banking house and its clients. The individual investor had, for many years, been accustomed to

rely upon the superior judgment of the investment banker in the origination of issues. The fact that the public had developed an appetite for securities with a speculative flavor gave no grounds for the investment banker's abandonment of his traditional obligation to safeguard the investor from uneconomic financing. The inadequacy of the available supply of sound issues furnished no excuse for the marketing of unsound ones. Beyond this, it seems clear that the intensive and high-pressure selling methods which became daily routine played no small part in whetting the public appetite for speculative securities. The accelerated pace of investment banking operations precluded thorough study of the issue and the exercise of sound judgment as to its merits. The undue emphasis on speedy distribution imposed on the dealer and his customer the crippling handicap of either making a hasty decision or forfeiting the opportunity of participating in the issue. Finally, it is evident that under no circumstances can the public appetite for securities, however avid, supply justification for the failure of the sponsoring firm to make full and fair disclosure concerning the issue.

GROWTH OF THE AMERICAN CORPORATION

These were some of the elements in the economic and social developments of the first three decades of the twentieth century; but they were not the whole picture. Another integral part was the phenomenal growth of the American corporation. In a bare quarter century corporations evolved from mere devices for the transaction of private business by individuals to complex mechanisms for the organization and control of economic life. So powerful was the impact of this change on the progress of the nation, so profound its implications for the average citizen, that a complete adjustment between the modern corporation and its environment has not even yet been attained. Our country continues to grapple with the problems presented by the remarkable growth of the corporate form, and to grope for better and more streamlined controls over the system.

The enactment of the Securities Act of 1933 and the Securities Exchange Act of 1934, and the establishment of the SEC in 1934, were products of this search for methods of dealing with one of the most striking phenomena of our twentieth century capitalist civilization—the development of the corporation into a major social institution. The obligations assumed by corporations in offering securities to the public; the use of the investment banking machinery as a conduit for the flow of capital to industry; the use of the exchanges and the over-the-counter markets as theaters for trading in securities; the manner in which transactions are effected in such markets; the impact of such transactions upon the current

of interstate commerce; the extent to which such transactions impinge upon the national credit; all these and other related matters have, in recent years, become allied with a national public interest. The merchandising of securities, in the language of President Roosevelt on approving the Securities Act, has become "traffic in the economic and social welfare of our people."

B. THE SECURITIES ACT OF 1933

The chief purposes of the Securities Act of 1933 are to provide full, fair, and accurate disclosure of the character of securities offered for sale in interstate commerce or through the mails, and to prevent fraud in the sale of such securities. The basic techniques by which disclosure is secured are the filing of a registration statement with the Securities and Exchange Commission and the delivery of a prospectus to the prospective investor.

The Commission has no power under the Act to approve or disapprove any security or to pass upon the merits or demerits of any security; and a representation to the contrary is a criminal offense. The Congress considered it essential to refrain from placing on any federal agency the duty of passing judgment upon the soundness of any security.

Nor does the Commission guarantee the accuracy of any statement made by an issuer in a registration statement or prospectus. The fact that the Commission has permitted a registration statement to become effective is not a finding that the statement is true and accurate on its face or that it does not contain an untrue or misleading statement or omission. The Commission does everything possible to obtain full, fair, and accurate disclosure in the registration statement and prospectus. To this end it is armed with power to make investigations; to subpoena witnesses; to require the production of any books, papers, or other documents which it deems relevant or material; to request the filing of amendments; to issue stop orders suspending the effectiveness of defective registration statements; to apply for injunctions against persons failing to comply with the statutory requirements; and to transmit evidence of violations to the attorney general for criminal prosecution. Notwithstanding these safeguards against false or misleading statements or omissions, such statements or omissions do occur. In order to prevent the prospective investor from jumping to the conclusion that the Commission approves the security or guarantees the accuracy of the registration statement or prospectus, every prospectus is required to set forth in bold-face on the front page a legend to the effect that the securities have not been approved or disapproved by the Commission, that the Commission has not passed on the merits of any securities registered with it, and that

it is a criminal offense to represent that the Commission has approved the securities or has made any finding that the statements in the prospectus or in the registration statement are correct.

THE DISCLOSURE PRINCIPLE

Underlying this statute and other legislation affecting securities and their markets will be found the philosophy that disclosure and publicity are the most effective of all regulatory devices and that the most important safeguard for the investor is to make available to him all the facts necessary to an intelligent appraisal of the value of a security. The merits of this philosophy have provoked considerable discussion. Since the question is fundamental, it may be fruitful briefly to examine the arguments for and against this principle of disclosure.

The argument most frequently advanced against the type of disclosure required by the Securities Act of 1933 may be summarized as follows: The preparation of registration statements and prospectuses is costly to issuers, involving the time and attention of corporate officials and employees away from their normal routine, and the services of lawyers, accountants, engineers, appraisers, and other experts, to say nothing of printers, all of whose combined efforts are usually necessary to present a true picture of the issuer's status. The average investor, for whose benefit these costs are incurred, is not equipped by experience to understand or evaluate the information he receives. Therefore, the argument concludes, the expenditure of time, money, and effort involved in preparing the information and presenting it to investors constitutes economic waste.

In reply to this argument one may safely grant that the average investor, when confronted with a 50-page registration statement or a 20-page prospectus, peppered with the terminology of the legal, accounting, and securities professions, will either put it gingerly aside or will endeavor to read it, with approximately the same net results. It may be further granted that an outlay of considerable time, money, and effort is required in the preparation of registration statements and prospectuses. It cannot be conceded, however, that this outlay constitutes economic waste. If it were many times as great, it would still be small in comparison with the gains attributable to disclosure and publicity. Some of those gains which are likely to be overlooked are here set forth for consideration.

ADVANTAGES OF FULL DISCLOSURE

In the first place, the very compulsion imposed on the seller of securities to furnish complete information serves as a powerful deterrent to fraud. This comment does not relate primarily to the fraudulent and deceptive

schemes and devices which are employed until they are stopped by the Commission, to borrow a phrase from the law of divorce, *in flagrante delicto*. It relates rather to the infinitely greater number of fanciful, vaporous, fatuous, and worthless promotions which never reach the stage of being offered to the public because of the disclosures required. It can never be known how many fraudulent promoters have abandoned their schemes at the outset rather than attempt to run the gantlet of registration. George Bernard Shaw once said that honesty varies inversely with temptation. If that be true, the Securities Act has substantially raised the general level of honesty by making the investing public a great deal harder for the sharpshooter to get at.

In the second place, the fact that the average investor cannot analyze a registration statement or prospectus does not mean that it is barren of usefulness. There are many agencies to perform that function for him. Investment bankers, investment counsel, banking institutions, commission houses, statistical services, financial publications—all these and many others are adequately equipped for this task. Thousands of investors rely upon the judgment of professionals in making their commitments; and competent professionals, before making a recommendation in respect of a new issue, will analyze the prospectus as a matter of routine.

The most important by-product of the disclosure principle, however, is the subtle, pervasive, and salutary influence it exerts upon standards of fair dealing in corporate finance. This is perhaps the most interesting and the least discussed aspect of the theory of disclosure. The knowledge that disclosure will be required hangs, like a specter, over the heads of the corporate lawyers as they draft the documents to be included in the registration statement; over the heads of the accountants as they prepare the balance sheet and the profit and loss statement; over the heads of the appraisers as they cogitate upon the value of tangible and intangible assets; over the heads of the promoters as they consider what their "take" in the enterprise ought to be; over the heads of the underwriters as they fix their spread; over the heads of the executives as they determine the value of their services, the size and price of their options, and the terms of their employment. The sure prospect of publicity ahead is an effective deterrent to legalistic legerdemain, to accounting acrobatics, to *convenient* appraisals, and to exorbitant promoters' fees, underwriters' spreads, and executives' salaries. Thus, the disclosure principle, which inexorably draws to the light every detail of a proposed public offering, exerts a wholesome influence upon the standards of business conduct. This may be counted as one of the chief economic gains resulting from the expense and effort of making the disclosure.

DEFINITIONS

As used in the Act many terms are considerably broader in their connotations than when they are used in common parlance. In determining the applicability of the Act to a particular set of circumstances, the statutory definitions should be borne in mind.

The term *security* means any note, stock, treasury stock, bond, debenture, evidence of indebtedness, certificate of interest or participation in any profit-sharing agreement, collateral trust certificate, preorganization certificate or subscription, transferable share, investment contract, voting trust certificate, certificate of deposit for a security, fractional undivided interest in oil, gas, or other mineral rights, or, in general, any interest or instrument commonly known as a *security*, or any certificate of interest or participation in, temporary or interim certificate for, receipt for, guarantee of, or warrant or right to subscribe to or purchase, any of the foregoing.

In determining whether a particular instrument is a security within the meaning of the Act, the substance of the transaction, rather than the form of the instrument, is controlling. No matter what label an instrument bears, it is usually held to be a security if the investor pays out his money on the assumption or expectation that the investment will return a profit without any active effort on his part.

The terms *sale*, *sell*, *offer to sell*, or *offer for sale* include every contract of sale or disposition of, attempt or offer to dispose of, or solicitation of an offer to buy, a security or interest in a security, for value; except that such terms do not include preliminary negotiations or agreements between an issuer and any underwriter.

The term *issuer* means every person who issues or proposes to issue any security. In the case of certificates of deposit, voting trust certificates, collateral trust certificates, or certificates of an unincorporated investment trust, the issuer is the person or persons assuming the duties of depositor or manager. That an issuer is invariably a corporate concern is a misconception. That is not always true, although in this discussion reference will be to a corporate concern unless otherwise indicated.

A *dealer* is any person who engages either for all or part of his time, as agent, broker, or principal, in the business of offering, buying, selling, or otherwise dealing or trading in securities issued by another person. Under the Securities Act of 1933, the term *dealer* includes a broker. Under the Securities Exchange Act of 1934, the two are distinguished and separately defined.

UNDERWRITERS

The term *underwriter* means any person who has purchased from an issuer with a view to, or sells for an issuer in connection with, the dis-

tribution of any security, or participates or has a direct or indirect participation in the direct or indirect underwriting of any such undertaking; but such term does not include a person whose interest is limited to a commission from an underwriter or dealer not in excess of the usual and customary distributor's or seller's commission. As used in this definition, the term *issuer* includes, in addition to an issuer, any person directly or indirectly controlling or controlled by the issuer, or any person under direct or indirect common control with the issuer.

The question of what constitutes *distribution* for the purpose of defining an underwriter sometimes presents difficulties. While the word *distribution* is not defined, it is clearly synonymous with the term *public offering* used in other provisions of the Act. If the offering is private, no distribution is involved within the meaning of the Act, the purchaser is not deemed to be an underwriter, and the registration requirements are not applicable. The standards for distinguishing between a public offering and a private offering will be discussed at a later point.

Distribution has been held to comprise the entire process by which a block of securities is dispersed and ultimately comes to rest in the hands of the investing public. Hence, in determining whether a distribution is involved, it is necessary to consider not merely the specific transaction between the issuer and its immediate purchaser, but also the extent to which a later public offering of the same securities is likely.

Being synonymous with *public offering*, *distribution* implies an offering of a substantial amount of securities to a substantial number of persons. A predetermination of the precise amount to be publicly dispersed is not, however, an essential element of distribution. If the total amount publicly dispersed is substantial, a distribution may be involved notwithstanding that the securities are sold in relatively small lots over an extended period of time.

Whether a purchase is made with a view to distribution or is made for investment must be ascertained in any given case by reference to the intention of the purchaser. What his intention was at the time of purchase is a question of fact. A state of mind can ordinarily be ascertained only by weighing evidentiary factors, and a person's actions may be of far greater weight than his statements in illuminating his state of mind. The primary factor to be weighed in ascertaining the purchaser's intention is undoubtedly the length of time elapsing between the acquisition of the securities and their resale. Although retention of the securities for any given length of time is not conclusive, it is obvious that the longer the securities are held, the easier it is to maintain that they were originally purchased for investment. If they are retained for as long a period as a

year, that fact creates a strong inference that they were purchased for investment.

A further factor which may be of importance in determining whether a purchase is made with a view to distribution or for investment is the nature of the purchaser's business. Where the purchase is made by an institutional investor or by an individual or firm not engaged in the securities business, the purchaser is in a stronger position to contend that he has purchased for investment than if he were engaged in the business of underwriting or dealing in securities. Where the purchaser is an underwriter or dealer, he would be required to show by the clearest kind of evidence that the scope and character of his business is consistent with the purchase of large blocks of securities for investment rather than with a view to distribution.

CONTROLLING STOCKHOLDERS

As has been noted, the concept of *underwriter* includes not only one who purchases from a *corporate issuer* with a view to distribution, but one who purchases from a *controlling stockholder* with a view to distribution. The policy of the Act, to provide for full disclosure of every material element attending a distribution, extends not only to the distribution of a new issue but to a redistribution of outstanding securities which takes on the characteristics of a new offering by reason of the control of the issuer possessed by the person making the offering. In order fully to effectuate this policy, the Act adopts the principle that a controlling stockholder is an issuer for the purpose of defining an underwriter and that any person who effects a distribution for a controlling stockholder is an underwriter. The result is to require registration in connection with secondary distributions through underwriters by controlling stockholders.

It should be noted, however, that a controlling stockholder is not an issuer, within the meaning of the Act, for any purpose except to define an underwriter. For example, he cannot satisfy the requirement that the registration statement be signed by the issuer.

Who is a controlling stockholder under the Act? The concept of control does not depend upon a mathematical formula of 51 per cent of voting power. The Commission has defined the term *control* to mean the possession of the power to direct or cause the direction of the management and policies of a corporation, whether through the ownership of voting securities, by contract, or otherwise. A practical test for control, as the term is used in the section defining an underwriter, is whether the stockholder has power to obtain registration, either alone or acting in concert with other related persons. In this connection it should be borne in mind

that where a stockholder seeks to obtain registration by the corporation in order to qualify his own securities for a public offering, it is incumbent upon him to offer to bear the expense of such registration. Consequently, the true practical test for a controlling stockholder is whether he is in a position to induce the management to prepare and file a registration statement, where all the expenses are to be paid by the stockholder himself. Since any stockholder in a position to accomplish this is a controlling stockholder, any person who undertakes to effect a distribution for him is an underwriter.

PROMOTERS

Who are the *promoters* of the issuer? The term *promoter* includes: (1) any person who, acting alone or in conjunction with one or more other persons, directly or indirectly takes initiative in founding and organizing the business or enterprise of an issuer; and (2) any person who, in connection with the founding and organizing of the business or enterprise of an issuer, directly or indirectly receives in consideration of services or property, or both services and property, 10 per cent or more of any class of securities of the issuer, or 10 per cent or more of the proceeds from the sale of any class of securities. However, a person who receives such securities or proceeds either solely as underwriting commissions or solely in consideration of property is not deemed a promoter if he does not otherwise take part in founding and organizing the enterprise.

The term *promoter* is broad enough to include one who, in concert with the actual incorporators, purchases property with the intent to sell it to an enterprise yet to be formed and to receive his compensation from the purchase price of securities to be distributed to the public. One need not take the primary initiative in founding and organizing the enterprise in order to be a promoter; it suffices that his initiative is secondary in character. An individual who advances money to incorporate the issuer with the understanding that it is to be repaid together with a portion of the stock has been held a promoter. On the other hand, one who loans money to the issuer and buys stock from it, but who had no connection with the founding or organization of the issuer or with the acquisition of its properties, was held not to be a promoter. Persons who join with the principal promoter in planning and financing the enterprise and who are compensated by payments in stock are promoters.

If there is reasonable doubt as to whether a particular person is a promoter, the registrant may, if it desires, disclaim this conclusion, but should set forth the underlying facts from which the investor may draw his own conclusion.

The Act does not forbid promoters' taking whatever profits they desire

from an enterprise, but it does require that investors be given full information with respect to such profits. The registrant is usually required by the Commission's forms to state the nature and amount of anything of value received by each promoter from the registrant and the nature and amount of any property, services, or other consideration received in exchange by the registrant. In the case of the ordinary corporation, this information is required for the preceding five years. In the case of mining corporations in the promotional stage, it is required for the preceding ten years.

REQUIREMENTS FOR INDEPENDENT ACCOUNTANT

What are the qualifications for an independent accountant? This is an important question, since a registrant is required to file financial statements certified by an independent public or certified accountant.

An accountant will not be considered independent with respect to an issuer in which he has any substantial interest, direct or indirect, or with which he is connected as an officer, employee, promoter, underwriter, trustee, partner, director, or person performing similar functions. An accountant who subordinates his judgment to the desires of his client is not independent. One who, as a result of connivance with, or loyalty or subservience to his client, purposely or recklessly misrepresents the facts, cannot qualify as independent. Reliance by the accountant upon unverified information supplied by officers or promoters may cast doubt upon his independence. Loans made by the registrant or its officers to the accountant, or vice versa, have been held to constitute evidence of lack of independence. An accounting firm is not independent if the combined holdings of the partners of the firm and their wives in the stock of the registrant are significant in relation to their combined fortunes, or the total capital of the firm. Nor is an accountant independent if he is an employee or partner of another accountant who holds substantial amounts of stock in the issuer.

The certificate of the independent accountant must be reasonably comprehensive as to the scope of the audit made and must state clearly the opinion of the accountant in respect of the financial statements and the accounting principles and procedures of the registrant. In certifying to the financial statements, the independent accountant may give due weight to an internal system of audit regularly maintained by auditors employed on the registrant's own staff. In such case, the independent accountant must review the accounting procedures followed by the registrant and satisfy himself that such accounting procedures are in fact being followed. The independent accountant may not omit any procedure which independent accountants ordinarily employ in the course of a regular annual audit.

Where the accountant in the course of his examination gains knowledge of facts of material importance to investors, he is under a duty of reporting such facts either in the balance sheet or in his report. Where the examination discloses facts casting doubt on the truth of material representations in the financial statements, the accountant is under a duty to express such doubts in his report unless, upon the basis of an investigation of available data, the doubts are reasonably dispelled.

EXPERTS

What are the general requirements with respect to experts preparing any part of the registration statement? Except in the case of an accountant certifying the financial statements, there is no specific requirement that any expert be independent. There is, however, a requirement that full disclosure be made of the interest of an expert in the issuer. If he was employed to prepare a report on a contingent basis, or at the time of his employment or thereafter had a substantial interest in the issuer or was connected with the issuer as a promoter, underwriter, voting trustee, director, officer, or employee, or controlled or was under common control with the issuer, all the pertinent facts should be disclosed. The interest of an expert should be disclosed even though it was acquired independently of his contract for the preparation of a report included in the registration statement.

If an expert is named as having prepared or certified any part of the registration statement, or a report or valuation for use in connection with the registration statement, his written consent must be filed with the registration statement. If any expert is named as having prepared or certified a report or valuation which is used in connection with the registration statement, but is not named as having prepared or certified such report or valuation for use in connection with the registration statement, the written consent of the expert must be filed with the registration statement unless the Commission dispenses with its filing as impracticable or as involving undue hardship on the registrant.

In one case the registrant filed with the registration statement an engineer's report and an application to dispense with the filing of the engineer's consent. In an affidavit accompanying this application, it was stated that the procurement of the consent was "impracticable and would involve an undue hardship." The "impracticability" was merely that of getting the consent in time for filing, and the "undue hardship" arose solely from the fact that no reply had been received to a letter sent to the engineer. The Commission held that this did not constitute a showing justifying the exercise of its discretion in favor of dispensing with the required consent.

An expert's report should be such that the layman may be able to appreciate the hazards of the undertaking and that other experts may be advised of facts from which the soundness of the observations and the conclusions drawn therefrom may be judged. The expert's opinion may be couched in technical terms, but it must be intelligible. It must truly reflect the facts observed by him. Descriptions of the property appraised, the methods employed, and similar statements contained in a report are pure representations of fact and are tested for truth and completeness like any other statements of fact. The registrant's use of a report containing misrepresentations or ignoring known facts constitutes an untrue statement, as does the use of a report neglecting scientific methods or disregarding the standards it purports to adopt.

APPRAISALS

In this connection it should be remembered that an appraisal purports to be more than an arbitrary determination of value; it seeks to attach value to objects as a consequence of scientific method. Valuations purporting to follow certain norms, even though representing informed judgments, are nevertheless representations that such norms have been accurately and fairly followed. If they are not followed, the valuations become misrepresentations of fact because they untruthfully describe the basis upon which the expert's judgment has been exercised. For example, where there are substantial differences between the registrant's past history of gross sales on the one hand, and the future estimates on the other, and where decidedly speculative factors enter into the estimates, the estimates do not represent a reasonable expectation, and an appraisal based thereon does not accurately and fairly follow the norms upon which it purports to be based. If an appraisal, or a representation of value purportedly based thereon, is not to be misleading, the appraisal must meet two tests: first, it must be based solely on scientific method and not upon foundations that are arbitrary or capricious; second, there must be a fair and accurate application of the methods purported to be followed.

PROCESS OF REGISTRATION

The process of registering a security under the Act and of obtaining an effective date for the registration is necessarily somewhat complicated. Generally, counsel is employed for this purpose; but, nevertheless, a general familiarity with the procedures involved is highly desirable.

Any security may be registered with the Commission by filing a registration statement in triplicate, one copy of which must be signed by the issuer, its principal executive officers, its principal financial officer, its comptroller or principal accounting officer, and the majority of its board of directors. A registration statement must be on the form prescribed by

the Commission; but a statement is deemed to be on the proper form unless objection is made by the Commission prior to the effective date.

REGISTRATION FORMS

Ever since its creation, the SEC has consistently sought to simplify the registration forms. The evolution of these forms has been such as to indicate a desire to achieve the fairest possible balance between a maximum of protection to investors and a minimum of difficulty to issuers. In recent years the Commission has promulgated a series of forms—the “S” Series—which materially simplify the preparation of the registration statement and cut down the expense involved, without sacrificing any of the information that an investor should have.

These forms require information only as to the registrant unless the context clearly shows otherwise. Information need be given only in so far as known or reasonably available to the registrant. If any required information is unknown and not reasonably available, either because the obtaining thereof would involve unreasonable effort or expense or because it rests peculiarly within the knowledge of another person not in a controlling relationship with the registrant, such information may be omitted so long as the registrant gives whatever information it possesses on the subject.

Where a summary or an outline of the provisions of any document is required, the answer must be brief. It is not intended that a statement shall be made as to all the provisions of the document, but only in condensed form as to the most important provisions. Confidential treatment will be accorded to the provisions of any material contract if the Commission determines that its disclosure would impair the value of the contract and is not necessary for the protection of the investors.

FILING FEE

At the time of filing a registration statement, the applicant must pay to the Commission a fee of $\frac{1}{100}$ of 1 per cent of the maximum aggregate price at which the securities are proposed to be offered, but such fee may not be less than \$25. Where securities are to be offered at the market, the registration fee is based upon the price at which securities of the same class were sold within 15 days prior to the filing. Within 10 days after the security is actually offered to the public, the registrant must file with the Commission a statement setting forth the actual price at which it was offered; and if such price differs from the price set forth in the registration statement, an explanation is required. There is no provision, however, for the payment of an additional fee if the actual price exceeds the proposed price; nor will the Commission refund any part of the fee paid if the proposed price exceeds the actual price.

The importance of a careful computation of the filing fee should not be overlooked for the reason that a filing date is not obtained unless the registration statement is accompanied by the prescribed fee. The failure, however, to pay an insignificant amount as the result of a bona fide error does not affect the date of filing.

AVAILABILITY OF REGISTRATION STATEMENT

The information contained in a registration statement is available to the public and copies thereof will be furnished to every applicant upon the payment of a reasonable charge. It should be emphasized that the contents of the registration statement are available to the public *prior to the effective date*, as well as thereafter, since this has a bearing on subsequent remarks with respect to the so-called *cooling period*.

The Commission releases a daily report of all events occurring in connection with each registration statement filed under the Act. These include the filing of each amendment, the date and manner in which each statement becomes effective, and all other material relating to Securities Act registration statements. The Commission also issues monthly a cumulative alphabetical index to registration statements referred to in the daily reports. These reports may be received regularly, upon written request to the Publications Section, SEC, 18th and Locust Streets, Philadelphia, Pennsylvania.

EFFECTIVE DATE

Where no amendments are required, the effective date of a registration statement is the twentieth day after the filing thereof. By an amendment to the Act adopted in 1940, the Commission is authorized to shorten this 20-day period if it determines that acceleration may be granted with due regard to the adequacy of the information respecting the issuer theretofore available to the public, to the facility with which the prospective investor can understand the nature of the securities to be registered, their relationship to the capital structure of the issuer and the rights of holders thereof, and to the public interest and to the protection of investors. To summarize, the effective date of a registration statement is the twentieth day after the filing date unless the Commission fixes an earlier date in an appropriate case.

Until the effective date it is unlawful for any person, directly or indirectly, to use the mails or the channels of interstate commerce to sell or offer to buy the security through the medium of a prospectus or otherwise; or to carry or cause to be carried through the mails or the channels of interstate commerce any such security for the purpose of sale or for delivery after sale. It should be borne in mind that the definition of *sale* includes any attempt or offer to sell. Hence, prior to the effective date, it

is unlawful for anyone to offer the security for sale, or to offer to buy the security, through the mails or in interstate commerce. This prohibition is not in conflict with the previous statement that all the information in a registration statement is open to public inspection before the effective date. Making the information available is entirely lawful. The prohibition is directed against the making of offers to sell or offers to buy before the effective date.

THE COOLING PERIOD

The period between the filing date and the effective date is colloquially referred to as the *cooling period*. In view of certain recent actions taken by the Commission which bear upon this cooling period, and in view of what appears to be a widespread misconstruction among investment bankers as to the effect of these actions, it will be interesting to review briefly the legislative background of the cooling period and to restate the basic principles concerning it.

The theory of the cooling period was fully outlined in 1933 in the House Report on the Securities Act as follows:

The compulsory . . . inspection period before securities can be sold is deliberately intended to interfere with the reckless traditions of the last few years of the securities business. It contemplates a change from methods of distribution lately in vogue which attempted complete sale of an issue sometimes within one day or at the most a few days. Such methods practically compelled minor distributors, dealers, and even salesmen, as the price of participating in future issues of the underwriting house involved, to make commitments blindly. This has resulted in the demoralization of ethical standards as between these ultimate sales outlets and the securities-buying public to whom they had to look to take such commitments off their hands. This high-pressure technique has assumed an undue importance in the eyes of the present generation of securities distributors, with its reliance upon delicate calculations of day to day fluctuations in market opportunities and its implicit temptations to market manipulation, and must be discarded because the resulting injury to an under-informed public demonstrably hurts the nation. It is furthermore the considered judgment of this committee that any issue which cannot stand the test of a waiting inspection over a month's average of economic conditions, but must be floated within a few days upon the crest of a possibly manipulated market fluctuation, is not a security which deserves protection at the cost of the public as compared with other issues which can meet this test. There is no more appropriate function of government than that it should encourage reasonable saving by protecting the fruits of that saving.

These words are applicable with equal force to the methods of distribution which prevailed prior to 1933 and to those which prevailed in 1945. The only perceptible difference was that the small cyclone which every new offering seemed to stir up in 1945 arose on the effective date of the registration statement. Dealers outside the underwriting group had

just as much difficulty in obtaining allotments of new issues and were under just as great pressure to make commitments blindly as in the period before the Act was passed.

The fault, it seems, lay partly with the underwriting industry, partly with the administration of the Act by the SEC, and not at all with the Act itself. The cooling period was designed to slow down the process of distribution. Beyond this it was designed to afford opportunity for public and professional scrutiny of the proposed issue. The Act contemplated that during the waiting period there would be widespread dissemination of information among dealers, and the public generally, with respect to the issue. At the same time it contemplated that during the waiting period no sales, offers to sell, or offers to buy would be made. These two objectives are entirely consistent. They ought to give rise to no uncertainty, no ambiguity, no hair-splitting interpretations. Unfortunately for the securities business and the public generally, they have given rise to all three.

DOCTRINE OF FEDERAL TRADE COMMISSION

The Federal Trade Commission made the following statements on the subject while it was administering the Act prior to the creation of the SEC:

The Act . . . has the purpose of hoping that public and professional scrutiny of the proposed issue will take place during this waiting period, so that, as distinguished from former days, neither the public nor the dealers will be taken unaware. Obviously this purpose cannot be accomplished merely by the filing of a registration statement with the Federal Trade Commission, even though a copy of such statement is open to public inspection, for only a limited number of the public could possibly have opportunity to inspect this statement. To that end, the Act expressly provides that copies of this statement at a reasonable price shall be furnished by the Commission on request to those who wish them.

. . . Surely, it would be odd, if what the Commission is under a duty to do, the issuer himself would be prevented from doing. In other words, the purpose of promoting general knowledge of the facts required to be stated in the registration statement is clearly set forth in the Act, and nothing in the Act restricts circulation of that knowledge to the Commission alone.

On the other hand, the Act is equally definite that no offers to sell shall be made until the expiration of the waiting period. It, therefore, contemplates, beyond peradventure of doubt, the circulation of knowledge concerning the matters called for in the registration statement as a preliminary to the formation of an intelligent opinion as to the desirability of a particular security prior to the arrival of the time when it permits that now ripened opinion to express itself in an offer to purchase the security. It also looks forward to this ripened opinion proving either a barrier or a harbor for such seductive arts as may still be used after the expiration of the waiting period to sell the security.

In response to the question of whether offers to sell and buy can be made and accepted prior to the effective date, with the understanding that they are conditioned upon the occurrence of the effective date, the FTC went on to say:

. . . Such a procedure would obviously fly in the face of the general purposes of the Act. Freedom of decision is demanded during the waiting period, and such offers induce the parties to whom they are addressed to divest themselves of a liberty of action which the Act insists that they shall have.

In response to the further question as to whether circulars describing a security in the manner of a prospectus, but clearly marked to indicate that they are informative only, can be circulated with impunity during the waiting period by an issuer or an underwriter, the FTC said:

You assume, as we assume, that both the letter and the spirit of these markings are strictly adhered to. Such conduct seems not only allowable but one that carries out the general purposes of the Act. Prospective purchasers, whether they be dealers or the general public, should during this waiting period be educated up to the nature of an issue, which it is expected that they will shortly be asked to buy, always reminding them that no determination to buy is requested of them until the expiration of the waiting period.

Such a procedure hardly needs any expression from this Division to indicate that it is permissible under the Act. The House Report expressly states, pp. 12-13:

The bill, apart from Section 16 (b), is not concerned with communications which merely describe a security. It is, therefore, possible for underwriters who wish to inform a selling group or dealers generally of the nature of a security that will be offered for sale after the effective date of the registration statement to circulate among them full information representing such a security. This could easily and effectively be done by circulating the offering circular itself, if clearly marked in such a manner as to indicate that no offers to buy should be sent or would be accepted until the effective date of the registration statement.

APPROVAL OF THE DOCTRINE BY SEC

The doctrine thus laid down at length by the Federal Trade Commission was never questioned by the SEC. It was fully approved in an opinion of the General Counsel of the SEC published in 1935. There it was stated that bulletins compiled by a statistical service, summarizing information taken from registration statements and prospectuses, could be freely circulated prior to the effective date of such registration statements. It was also stated that issuers, underwriters, and dealers could circulate the bulletins to potential investors so long as they did not themselves constitute offers to sell and were not in furtherance of offers to sell. It was pointed out that if an underwriter or dealer were to supplement a bulletin with selling literature or with a recommendation for

purchase, or were to attempt to obtain from the recipient some indication of interest in purchasing the described security, such action would establish that the bulletin was being used in an attempt to dispose of the security.

THE RED-HERRING PROSPECTUS

The doctrine laid down by the Federal Trade Commission and approved by the SEC gave rise to the use of the *red-herring* prospectus. Technically speaking, a red-herring prospectus is a circular describing a security in the same manner in which the final selling prospectus describes the security, but clearly and unmistakably marked to indicate that it is informative only and is not intended to solicit offers to buy or to make an offer to sell.

The term *red herring* is derived from the fact that each page of the document contains a statement printed in red ink to the effect that the document is not an offer to sell or the solicitation of an offer to buy any security and that no offer to sell can be made and no offer to buy can be accepted until after the effective date of the registration statement.

The purpose of the red-herring prospectus is to disseminate information concerning the security during the period between the filing date of the registration statement and the effective date.

As noted above, the effective date of a registration statement is the twentieth day after the filing date, but the Commission may accelerate the effective date in a proper case. The Act contemplated that during the cooling period there would be widespread dissemination of information among dealers and the public generally with respect to the security. At the same time it contemplated that no sales, offers to sell, or offers to buy, would be made until the effective date. Obviously, public and professional scrutiny cannot be stimulated merely by the filing of a registration statement, since relatively few persons ever have opportunity to inspect the statement itself. The Congress, recognizing this fact, met the problem for the period after the effective date by requiring that the sale of a registered security be accompanied or preceded by the delivery of a prospectus to the purchaser. While no express provision was made in the Act for a medium of transmitting information to prospective purchasers during the cooling period, there can be no doubt as to the Congressional intention that information should be disseminated during that period.

Early in the administration of the Act, the red-herring prospectus emerged as the most effective vehicle for the transmission of information during the cooling period. In order that the red herring should not run afoul of the prohibition against making offers to sell or soliciting offers

to buy before the effective date, it was required to comply with certain standards. In general, these were that the red herring should be a fair summarization of the salient information in the registration statement; should not stress or emphasize the favorable as against the unfavorable aspects of the security; should contain no recommendation or opinion as to the merits of the security; and should be clearly marked to indicate that it was informative only and to negative any intent to solicit orders. When these standards were met, the red herring could be sent to underwriters, dealers, brokers, and institutional and individual investors without violation of the Act.

ACCELERATION AFFECTED BY USE OF RED HERRING

This was the general situation, and it seemed to be working fairly well, until April 30, 1945. On that date the SEC issued a statement of policy regarding requests for the acceleration of the effective date where red-herring prospectuses had been circulated. The Commission's statement of policy was as follows:

Section 8 (a) of the Securities Act of 1933 provides that the "effective date of a registration statement shall be the twentieth day after the filing thereof or such earlier date as the Commission may determine, having due regard to the adequacy of the information respecting the issuer theretofore available to the public . . . and to the public interest and the protection of investors." In considering a request for acceleration of the effective date of a registration statement in a case where a "red herring" prospectus which was inaccurate or inadequate in material respects has been circulated, the Commission considers that the statutory standards of this section have not been met. Accordingly the Commission will not order acceleration in such a case until it has received satisfactory assurances that by appropriate means the nature of the material amendments to the registration statement have been communicated to those persons to whom the "red herring" prospectus was distributed.

An immediate result of the announcement of this policy was to create a general doubt in the minds of underwriters as to the advisability of continuing the use of red-herring prospectuses. Compliance with the Commission's standards for acceleration involved several practical difficulties. An underwriter might keep careful records of the names and addresses of dealers to whom he delivered red herrings, and yet be unable to supply the "satisfactory assurances" necessary to obtain acceleration. Since the Commission's statement of policy referred to all persons to whom the red herring was distributed, the underwriter was required to inquire into the identity of all persons who had received the red herrings from the dealers, their salesmen, and employees. As the number of such persons expanded, the difficulty of later identifying them increased. Where the members of a selling group included dealers in various sections

of the country, no adequate controls could feasibly be maintained by the underwriters over the distribution of red herrings. Accordingly, underwriters grew more and more reluctant to jeopardize the granting of requests for acceleration by setting in motion a process which made it difficult for them to supply satisfactory assurances that later amendments had been communicated to all persons to whom the red herrings were distributed. It was simpler, many underwriters believed, to abandon the red herring altogether.

While the Commission's objective may have been sound, the means used to achieve the objective were unfortunate. In seeking to correct what may have been an abuse, namely, the dissemination of inadequate red herrings, the Commission succeeded in discouraging the development of the most practical device for circulating information during the waiting period.

THE VAN ALSTYNE, NOEL CASE

Several months later, the Commission handed down its decision in the matter of Van Alstyne, Noel & Company, which contributed to the general confusion, although there was no reason why it should have done so. The case simply involved the question of whether the Van Alstyne firm had violated Section 5 of the Securities Act in selling the common stock of Higgins, Inc., prior to its effective registration.

The registration statement was filed on January 30, 1946, and on the date of the Commission's decision in the matter it had not yet become effective. On December 14, 1945, the firm made arrangements with Andrew J. Higgins for the underwriting of 900,000 shares of the common stock of Higgins, Inc. On January 4, 1946, the firm had communicated with dealers throughout the country to inform them of the underwriting and to inquire whether they wished to participate. That afternoon Mr. Van Alstyne telephoned Mr. Higgins to advise him that the underwriting was a success. On January 11, Mr. Higgins wrote to Mr. Van Alstyne stating that, "The spectacular manner in which your company received oversubscriptions to the Higgins issue has upset the placidity of New Orleans. My phone at the house is ringing constantly and people here in management are being besieged by irate citizens as to why it is they cannot get some of the Higgins stock. Fenner & Beane have advised their clientele that their meager allotment was sold out in a few minutes. All this should be gratifying to you, as it is to us."

On January 10, 1946, the formation of a selling group, consisting of about 160 dealers, was completed. Numerous requests were received by dealers from their customers offering to buy the stock. The dealers communicated with the Van Alstyne firm, which allotted to them an aggre-

gate of 104,500 shares; and they, in turn, allotted specific amounts of stock to their customers. In addition, the Van Alstyne firm itself received numerous offers from its customers and entered on its books "buy" order tickets for its customers for an aggregate of 2,600 shares. All this was done before the registration statement was filed on January 30, 1946.

The Commission found that the Van Alstyne firm had effected sales of the stock prior to the effective date of the registration statement; that its transactions had gone beyond the stage of preliminary negotiations or agreements between the issuer and the underwriters, which negotiations are not sales within the meaning of the Act; and that sales had actually been effected to members of the selling group, and, indeed, to some public investors. On these facts the Commission found a wilful violation of Section 5 (a) of the Securities Act, and suspended the firm from membership in the National Association of Securities Dealers for a period of 10 days.

There was nothing new or startling in this decision. It simply enforced the provisions of the Act making it unlawful to sell securities prior to the effective date. But in conjunction with the Commission's previous statement of policy on red-herring prospectuses, the decision created more general consternation than it might otherwise have done. It still further fortified the determination of cautious underwriters and their lawyers to allow no information to be distributed concerning prospective issues.

AMENDMENTS TO REGISTRATION STATEMENTS

An amendment to the registration statement filed prior to the effective date automatically starts the cooling period running anew, except when the amendment is filed with the consent of the Commission or pursuant to its order. In other words, the filing of a pre-effective amendment automatically changes the filing date of the registration statement to the filing date of the amendment, unless the Commission orders otherwise. A rule of the Commission vests the agent for service designated by the registrant with power to amend by simply altering the offering date. This rule was originally adopted to provide a method whereby the Commission may request the agent for service to file a delaying amendment in order to afford the registrant an extension of 20 days to cure deficiencies and thereby avoid the threat of refusal or stop order proceedings.

When the registrant believes that its amendment is adequate to cure all deficiencies, it may make application for the Commission's consent to the filing of the amendment as if it were part of the registration statement as originally filed, so that the cooling period will not begin anew. The grounds of the application must be fully stated and, upon the entry by

the Commission of an order to that effect, the amendment is treated as part of the registration statement and effectiveness is no longer delayed.

POWER OF ACCELERATION

This power of acceleration has been developed by the Commission into an important administrative device. Reference has already been made to the manner in which the exercise of the power has affected the use of the red-herring prospectus. While the Commission has no authority to pass upon the merits of any security, it can, by withholding acceleration and calling for delaying amendments, put off the effective date and keep the issue from distribution for months, if it disapproves any feature of the financing. An issuer or an underwriter, confronted with a long series of delays in obtaining an effective date, may be tempted to give up the whole idea of new financing in sheer weariness or disgust.

It may be a good thing or a bad thing for the public that some issuers retire from the field after repeated calls for delaying amendments. The point is that the administrative technique being discussed here possesses dangerous possibilities. It could, in the wrong hands, be used for purposes which were not intended by the Congress. Perhaps, not in this administration, but in some future one, officials of the SEC might be tempted, through the unwarranted exercise of the power of acceleration and delay, to put their own stamp of approval or disapproval on the merits of a security. This was never contemplated by the Act. It was never intended that the Commission should have power to prevent a registration statement from becoming effective once it tells the truth, the whole truth, and nothing but the truth. The truth must be respected regardless of the company in which it is found. If the company turns out to be bad, there are adequate sanctions provided in the Act to deal with fraud and other improper practices in the marketing of the security. But where a statement contains no deficiencies, it is mandatory on the Commission to permit it to become effective, regardless of the Commission's opinion as to the wisdom or merits of the financing.

PRE-EFFECTIVE AND POST-EFFECTIVE AMENDMENTS

Amendments to the registration statement may be filed by the registrant at any time, either prior to or after the effective date. Pre-effective amendments are generally filed in order to prevent the registration statement from becoming effective in deficient form, which would give the Commission a basis for instituting stop order proceedings. Post-effective amendments are generally filed to correct deficiencies which existed in the registration statement at the effective date, but which were not discovered until afterward. Theoretically, a post-effective amend-

ment is not filed in order to correct a statement which reflected the truth at the effective date but is no longer true. In practice, however, the Commission sometimes permits the filing of post-effective amendments to show matters arising after the effective date. This is not authorized by the Act. Under the Act, the truth of a statement is tested as of the effective date. If the statement was deficient at the effective date, the registrant is under an obligation to correct the deficiency regardless of when the deficiency is discovered. But if the statement was not deficient at the effective date, no subsequent change in circumstances will make it compulsory for the registrant to file a post-effective amendment.

On the other hand, a subsequent change in circumstances which renders the information no longer true in a material respect does require an amendment to the prospectus. The offering of a security cannot be continued on the basis of a prospectus which contains representations that are no longer true in a material respect. For example, let us assume that the issuer is a manufacturing company with a fully equipped plant, necessary for its manufacturing operations. Both the registration statement and the prospectus contain a description of the plant, and the balance sheet carries it at a substantial valuation. The statement becomes effective and the offering begins. A week later the plant is destroyed by fire. There is no obligation to file a post-effective amendment to the registration statement, since the description of the property contained in the statement was accurate at the effective date; but there is a duty to correct the prospectus so that prospective purchasers will not be misled. In practice, however, the Commission will usually permit the filing of a post-effective amendment under such circumstances.

Since post-effective amendments do not become effective until the Commission declares them effective, it is usually advisable that no offers to sell be made until the Commission so declares, or if the offering has begun, that it be stopped immediately. Because the purpose of the post-effective amendment is to correct a deficiency which existed at the effective date, any offers to sell before the Commission's order is entered are foolhardy in the extreme and constitute open invitations to stop orders and civil suits.

WITHDRAWALS OF REGISTRATION STATEMENT

Before a registration statement has become effective, the registrant has an absolute right, not subject to administrative discretion, to withdraw it. This point was decided by the United States Supreme Court in the case of *J. Edward Jones vs. SEC* (298 U. S. 1). Where the statement has become effective and sales have been made thereunder, or where the registrant fails to demonstrate that no sales have been made thereunder,

the withdrawal of registration is within the discretion of the Commission. Under such circumstances, the test for the right of withdrawal is the absence of prejudice to the public or to investors. Where securities have been offered or sold to the general public, the Commission usually takes the position that it will not permit withdrawal but instead will enter a stop order, which gives the widest possible publicity to the deficiencies.

THE PROSPECTUS

Since the prospectus is the part of the registration statement which is most generally furnished to investors, the Commission has repeatedly urged the use of a concise and readable document. The registration forms contain instructions specifying material which may be omitted from or condensed in the prospectus, and the Commission has published opinions specially illustrating what it regards as excessively detailed prospectuses, together with its views as to how they could be rewritten. The prospectus is meant to be an epitome or summary, and, obviously, should not be as discursive as the longer registration statement. The Commission's rules clearly indicate that the prospectus is not to contain the same degree of particularity as the registration statement.

The reluctance of issuers and underwriters to follow the lead of the Commission in the direction of simplifying prospectuses may well be based upon a false premise. Persons who lend their names to a registration statement and prospectus fear that in the event of their compliance with the Commission's rules and instructions, they may nevertheless be subjected to liability in a civil action to which the Commission is not a party. It seems, however, that this fear is exaggerated. Section 19 (a) of the Act provides that no provision of the Act imposing any liability shall apply to any acts done or omitted in good faith in conformity with any rule or regulation of the Commission. Consequently, the condensation and simplification of the prospectus in good faith, in accordance with the Commission's rules, should prevent any civil liabilities from arising.

It should be noted, however, that the privilege of condensation and simplification does not apply to the financial statements. Such financial statements as are set forth in the prospectus must conform exactly with the corresponding financial statements, including footnotes, in the registration statement. The supporting schedules may be omitted from the prospectus, with a few exceptions specified in the rules and instructions.

Every prospectus is required to set forth the following legend in bold-face on the front page:

These securities have not been approved or disapproved by the Securities and Exchange Commission. (insert name of issuer)
has registered the securities by filing certain information with the Commission.

The Commission has not passed on the merits of any securities registered with it. It is a criminal offense to represent that the Commission has approved these securities or has made any finding that the statements in this prospectus or in the registration statement are correct.

In case the registrant or any of the underwriters knows or has reasonable grounds to believe that it is intended to stabilize the price of any security to facilitate the offering of the registered security, the first or second page of the prospectus must set forth in bold type a legend to that effect.

When a prospectus is used more than thirteen months after the effective date, the information must be as of a date not more than twelve months prior to such use, so far as such information is known to the user of the prospectus or can be furnished by such user without unreasonable effort or expense.

DEFINITION OF PROSPECTUS

The Act makes it unlawful for any person to use the channels of interstate commerce or the mails to carry or transmit a prospectus relating to a registered security unless such prospectus meets the statutory requirements. It is further unlawful for any person to carry a registered security or cause it to be carried through the mails or in interstate commerce for the purpose of sale or delivery after sale, unless accompanied or preceded by a proper statutory prospectus.

These prohibitions are readily understood in their bearing upon the prospectus in ordinary use—the selling circular designed to be delivered to prospective purchasers after a registration statement has become effective. What is less generally understood is that many types of communications not commonly regarded as prospectuses are within the statutory definition of the term.

The Act defines a prospectus to include any notice, circular, advertisement, letter, or communication, written or by radio, which offers a security for sale. It is a question of fact in each case as to whether a communication offers a security for sale.

The definition excludes a communication if, prior to or at the same time with the communication, the maker of the communication sends a proper statutory prospectus to the prospective purchaser. This exception makes it lawful for a dealer, after he has opened negotiations with a prospective purchaser by supplying him with a statutory prospectus, to give him such additional information as the dealer may deem desirable. The additional literature, of course, should be free from false or misleading information.

The definition of a prospectus also *excludes* a notice, circular, advertisement, letter, or communication which does no more than identify the

security, state the price, state by whom orders will be executed, and state from whom a statutory prospectus can be obtained. This last exception is the basis for the so-called *tombstone* prospectus used in newspaper advertising. It permits the advertisement to name the security, state the price and by whom orders will be executed and from whom a statutory prospectus is obtainable, but no more than that.

EXEMPT SECURITIES

The Act provides for two general types of exemptions—the exemption of certain types of securities from all except the fraud provisions, and the exemption of certain types of transactions from the registration and prospectus requirements. The exemptions are strictly construed and the claimant of an exemption has the burden of showing that he falls within the terms of the exemption he claims.

The exempted securities are relatively easy to identify. They include the following:

1. Securities issued or guaranteed by the United States or any state or territory thereof, or any political subdivision of a state or territory, or any public instrumentality of one or more states or territories, or any national or state bank.
2. Commercial paper arising out of current transactions and having a maturity at the time of issuance of not more than nine months.
3. Securities issued by nonprofit organizations.
4. Securities issued by building and loan associations, and similar institutions, provided that the issuer does not take more than 3 per cent of the face value of the security as a withdrawal fee.
5. Securities issued by common carriers.
6. Certificates issued by a receiver, or a trustee in bankruptcy, with court approval.
7. Insurance policies and annuity contracts.
8. Securities issued in reorganizations approved by a court or governmental authority.
9. Any security exchanged by the issuer with its existing security holders exclusively where no commission or other remuneration is paid or given, directly or indirectly, for soliciting such exchange.
10. Any security which is part of an issue sold only to residents of the state in which the issuer is incorporated and is doing business.

EXEMPTION OF SECURITIES ISSUED IN EXCHANGES

Questions are most likely to arise with respect to the two categories of exempted securities last mentioned. The exemption afforded to the exchange of securities is strictly limited to securities exchanged exclusively

for those of the same issuer. Thus, the exemption does not apply to an exchange of the securities of a parent corporation for the securities of a subsidiary, or vice versa.

Again, the exemption is not available unless the exchange is made with existing security holders exclusively. So, if any part of the issue is sold for cash, the exemption is entirely lost. This does not imply that the exemption is lost if securities of the same class are sold for cash at any subsequent time; it means only that they may not be sold for cash as part of the same transaction in which the exchange is effected. On the other hand, the exemption is not lost because the issuer pays cash to its security holders along with the new securities in the exchange. Cases frequently arise in which a corporation proposes to wipe out accumulated dividends on outstanding stock by issuing a new class of stock in exchange therefor. In such cases the exemption applies.

Finally, it should be noted that the exemption applies only where no commission or other remuneration is paid for soliciting the exchange.

This exemption is not a permanent one as is, for example, the exemption provided for government securities. After the exchange is completed, transactions may arise in the same securities which require registration. For example, the securities exempted in an exchange cease to be exempt if they are subsequently offered by a controlling stockholder through an underwriter.

EXEMPTION OF INTRASTATE ISSUES

The exemption afforded to intrastate issues is strictly limited to issues which are sold to persons resident within a single state, where the issuer is incorporated by and doing business in the same state. The entire issue must be sold to residents of such state and the sale of any portion to nonresidents deprives the entire issue of the exemption. Since the term *sold* includes any offer to sell, the mere offering of a part of the issue to a nonresident destroys the exemption, even if the nonresident does not buy. Moreover, all previous sales to residents, which up to that point were legal, may be rendered illegal as a result of such offer. If any such contingency should arise, the advisable procedure is to take steps to register the entire issue.

EXEMPTIONS FOR SMALL ISSUES

In addition to the exempted securities which have thus far been mentioned, the Commission is authorized by the Act to exempt securities if the aggregate amount at which the issue is offered to the public does not exceed \$300,000. These exemptions are not unconditional, but are available only if the regulations prescribed by the Commission are complied with.

Under the Commission's rules an exemption is provided for securities offered by the corporate issuer where the aggregate offering price does not exceed \$300,000. A further exemption is provided for securities offered by a controlling stockholder of the corporate issuer where the aggregate offering price does not exceed \$100,000. In both cases, the aggregate offering price must take into account not only the securities presently to be offered, but also all securities sold pursuant to an exempted offering which was commenced during the preceding 12-month period, and all unregistered nonexempt securities which were sold during the preceding 12-month period. The rules also require that a letter of notification be filed with the Commission containing certain information with respect to the offering. The information required constitutes only a small portion of the information which would be required in a registration statement. A 5-day cooling period is prescribed after the filing of the letter of notification before the securities may be offered.

In connection with these small exempted offerings, no prospectus need be used. If a prospectus is used, however, it must contain certain minimum information regarding the offering and be filed with the Commission. It must also contain a legend that the securities have not been registered with the Commission or approved or disapproved by the Commission.

EXEMPT TRANSACTIONS

Certain types of transactions are exempted from the registration and prospectus requirements. The sections of the Act in which these exemptions are found broadly draw the line between the distribution of securities and trading in securities, indicating that the Act is, in the main, concerned with the problem of distribution as distinguished from trading.

An exemption is provided for transactions by any person other than an issuer, underwriter, or dealer. The holder of a block of securities who is not an issuer, underwriter, or dealer is free to make a public offering of his holdings without regard to the registration or prospectus provisions. It should be remembered, however, that the term *issuer* includes a controlling stockholder of the corporation for the purpose of defining an underwriter.

Let us examine the situation presented when a controlling stockholder, not engaged in the securities business, desires to liquidate his holdings through a dealer. The controlling stockholder is not an issuer, except for the purpose of defining an underwriter. He personally qualifies for the exemption because he is neither an issuer, underwriter, nor dealer. On the other hand, the dealer who undertakes to distribute the stock does not qualify for the exemption, because he is both a dealer and an underwriter

purchasers against loss; taking or granting options at stepped-up prices or at prices above the prevailing market price; purchasing stock on an exchange at prices above the price at which it could be taken down under an option; procuring stand-off or withholding agreements during the pendency of a distribution; all these are devices in aid of manipulation which were altogether uncontrolled before the investigation.

USE OF CREDIT FOR SPECULATION

The final situation calling for remedial legislation which will here be mentioned was the absence of any satisfactory control over the use of credit for speculative purposes. The credit facilities for the purchase of securities on margin in this country, prior to 1934, were unequalled anywhere. The sole prerequisite to the establishment of a margin account was the deposit with a broker of a comparatively small portion of the purchase price. The balance was supplied by the broker, who, in turn, had easy access to the credit reservoirs of the country through the medium of loans from banks, private corporations, and other brokers.

The financial and moral responsibility of the customer was beside the point. The broker, confidently relying upon the mechanism of the exchange to aid him in swiftly liquidating the collateral when necessary, did not hesitate to lend his credit to nearly all comers. The celerity with which margin transactions were arranged encouraged persons in all walks of life to embark upon speculative ventures in which they were doomed by their lack of skill, knowledge, and experience to eventual loss. Excited by the vision of quick profits, they assumed margin positions which they had no adequate resources to protect, and when the storm broke, they stood helplessly by while securities and savings were washed away in a flood of liquidation.

CREATION OF THE SEC

The disclosures before the Senate Committee had served to focus public attention upon conditions which had long been apparent to informed observers. The logic of events called for the enactment of remedial legislation. The nation was aroused at last to the realization that transactions on exchanges and in the over-the-counter markets are affected with a national public interest, that, directly or indirectly, the influence of such transactions permeates the national economy in all its phases, and that there was vital need for safeguards against the excessive, uninformed, and unrestrained speculation which had laid the foundation for and then precipitated the collapse of the wild bull market of the 1920's. This was the setting in which the Securities Exchange Act of 1934 was passed by the Congress.

The Securities Exchange Act of 1934 created the SEC. To the SEC was immediately assigned the administration not only of the Exchange Act but of the Securities Act of 1933, which had theretofore been administered by the Federal Trade Commission. Later, the functions of the SEC were expanded to include the administration of the Public Utility Holding Company Act of 1935, the Chandler Act, the Trust Indenture Act of 1939, the Investment Company Act of 1940, and the Investment Advisers Act of 1940.

The Commission has three main operating divisions: the Corporation Finance Division; the Trading and Exchange Division; and the Public Utility Division. Matters arising under the Securities Exchange Act with respect to the operations of the stock exchanges and to trading on the exchanges or in the over-the-counter markets are, for the most part, supervised by the Trading and Exchange Division.

MECHANISMS OF CONTROL

Generally speaking, the mechanisms of control created by the Act may be classified, in respect of the incidences of control, under five main headings:

1. Controls over exchanges.
2. Controls over listing, unlisted trading privileges, and proxy solicitations.
3. Controls over broker-dealers.
4. Controls over trading.
5. Controls over credit.

Against the background previously described, it is possible to relate these mechanisms of control with the conditions which they were designed to eliminate. It will be observed that the philosophy of regulation through disclosure recurs again and again in this Act, just as it did in the Securities Act.

CONTROLS OVER EXCHANGES

The central principle of regulation in respect of the exchanges is contained in the requirement that they be registered with the Commission as national securities exchanges or be exempted from registration. There are nineteen registered exchanges and six exempted exchanges at the present time. In the registration statement, each exchange is required to disclose a complete picture of its activities, resources, membership, and rules. It also must agree to comply, and to enforce, so far as is within its power, compliance by its members with the Act and the rules thereunder. The rules of the exchange must provide for the expulsion, suspension, or

disciplining of a member for conduct or proceeding inconsistent with just and equitable principles of trade, and must declare that the wilful violation of the Act or any rule thereunder shall be considered conduct or proceeding inconsistent with just and equitable principles of trade.

The Commission is empowered, if it deems the rules of an exchange inadequate to insure fair dealing, to order the rules altered or supplemented. It is the existence of this power that lends force to the suggestions of the Commission for changes in exchange rules.

CONTROLS OVER LISTING, UNLISTED TRADING PRIVILEGES, AND PROXY SOLICITATIONS

Unless a security is registered on a national securities exchange or exempted from such registration, it may not be the subject of trading thereon. Registration is accomplished by the issuer filing an application with the exchange and with the Commission and submitting certain prescribed data designed to inform investors of the essential facts concerning the issuer. Issuers are also required to file for the benefit of investors periodic reports of their current situation. Adequate safeguards are erected against the disclosure of trade secrets or processes.

The registration of a security for exchange trading under the Securities Exchange Act of 1934 is sometimes confused with the registration of an issue for sale under the Securities Act of 1933. Since the passage of the Securities Exchange Act of 1934, the issuer of every nonexempted security then or thereafter listed on an exchange has been required to file a registration statement under the Exchange Act as a prerequisite to trading on the exchange. Since the passage of the Securities Act of 1933, whenever a public offering is to be made of a nonexempted security, whether listed or not, the issuer is required to file a registration statement under the Securities Act of 1933. The objective of the Commission has been to make the forms for registration under both acts as nearly identical as possible.

Once registered for trading on the exchange, a security may not be withdrawn or stricken from the list except in compliance with the rules of the exchange and upon such terms as the Commission may impose for the protection of investors. An application to withdraw or strike a security from the list may be made by the exchange or by the issuer, and in the latter case all known holders of the security are entitled to notice and opportunity to be heard.

An exchange may be authorized by the Commission to continue unlisted trading privileges in a security if it enjoyed such privileges prior to March 1, 1934, or if there is available adequate information concerning the security by reason of the registration of such security on another

exchange or by reason of the filing by the issuer of a registration statement under the Exchange Act or the Securities Act of 1933 covering any security of such issuer. In order that a security may qualify for unlisted trading privileges, it must also be established that there is sufficient public distribution and public trading activity in the vicinity of the exchange to give some promise of a fair and orderly market on the exchange and thus render exchange trading in the public interest. Every exchange is required by appropriate symbols, in the publication of quotations or prices on its ticker or otherwise clearly to distinguish between fully listed securities and securities admitted to unlisted trading privileges.

The Commission has power to prescribe rules governing the use of the mails or the facilities of interstate commerce to solicit any proxy, consent, or authorization in respect of a listed security. In fashioning those rules, the Commission has adhered closely to the statutory theory of disclosure, this time with respect to the persons soliciting proxies. Proxies may not be solicited until the proxy material has been in the hands of the Commission for at least 10 days, or such shorter period as the Commission may fix, and unless a written proxy statement containing the prescribed information is supplied to every person solicited.

CONTROLS OVER BROKERS AND DEALERS

The Commission is authorized to regulate or prevent floor trading by exchange members for their own account or for discretionary accounts, and to prevent excessive trading off the floor by members for their own account in so far as such trading may be detrimental to the maintenance of a fair and orderly market. It is also empowered to prevent specialists from dealing for their own account or to restrict their dealings to those reasonably necessary for the maintenance of a fair and orderly market or for the performance of the functions of an odd-lot dealer.

The Commission has promulgated no rules under these sections. It has, however, recommended rules for adoption by the exchanges. The so-called *Trading Rules*, adopted by the exchanges in 1935, were designed to insure on the part of brokers more scrupulous adherence to their fiduciary obligation and to provide additional safeguards against certain activities on exchanges which lend themselves to manipulation or excessive trading. The *Daylight Trading Rules*, adopted by the exchanges in 1937, were aimed at *shoe-string* trading by members, and, in effect, require that a member at all times have available adequate capital to margin his commitments even though such commitments are made and liquidated on the same day.

These rules were recommended by the Commission and adopted by the exchanges only after numerous conferences between the Commission and

officials and members of the exchanges and their counsel, and after substantial agreement had been reached that the step under consideration was adequate to accomplish its objective without disrupting or impeding the market machinery. It was believed that by permitting the exchanges to adopt the rules greater flexibility of administration would be attained and the danger of interference with legitimate business practices would be minimized.

Other provisions of the Act apply to brokers and dealers generally, whether or not they are exchange members. A broker who also acts as a dealer may not extend or arrange for the extension of credit to a customer on any security which was part of a new issue in the distribution of which he participated within six months prior to the transaction. Such a broker is likewise required to disclose to a customer in writing, at or before the completion of a transaction, the capacity in which he is acting.

On the over-the-counter side, every broker or dealer who uses the mails or the channels of interstate commerce to effect or induce transactions otherwise than on a national securities exchange is required to be registered with the Commission. Only those whose business is exclusively intrastate or who deal exclusively in exempted securities are free from the necessity of registration. A broker or dealer may not effect or induce an over-the-counter transaction by means of any manipulative, deceptive, or otherwise fraudulent device or contrivance; and the Commission is required to define by rule such devices and contrivances as are manipulative, deceptive, or otherwise fraudulent. The registration of a broker or dealer may be denied or revoked if it appears that he, or any member, branch manager, salesman, or other employee of his firm has been convicted of a crime or enjoined in connection with a securities transaction or practice, or has made a willful misstatement in the registration statement, or has willfully violated the Securities Exchange Act or the Securities Act or any rule of the Commission.

SELF-REGULATION

The Commission fathered the Maloney Act, an amendment to the Securities Exchange Act, which is designed to encourage the impulse toward self-regulation and to elevate the standard of business ethics beyond the point that legislation unaided can achieve. The Maloney Act established the mechanism by which an association of brokers or dealers, voluntarily organized, can be registered with the Commission as a national securities association. After registration, the burden of establishing and enforcing fair trade practices among its members devolves upon the association. An appeal lies to the Commission from any penalty imposed upon a member by his association.

The Maloney Act is the statute under which the National Association of Securities Dealers, Inc., was organized and is functioning. Nonmembership in the NASD deprives a broker or dealer of preferential business opportunities and advantages which members enjoy. The Maloney Act, however, was not intended to encourage the growth of monopoly; it was intended rather to lubricate and improve the competitive process by raising the plane upon which it is conducted.

CONTROLS OVER TRADING

Wash sales and matched orders are, of course, banned by the Exchange Act. It is unlawful for any person to effect a series of transactions in a registered security creating actual or apparent active trading therein or raising or depressing the price thereof for the purpose of inducing its purchase or sale by others. Dealers and brokers are prohibited from inducing transactions in a registered security by false or misleading statements or by disseminating information to the effect that the price is likely to change as a result of market operations for a rise or decline.

The Commission's rules impose restrictions upon the price at which *short sales* may be effected by any person on an exchange. Such restrictions are designed to prevent short sales from creating or accentuating a disorderly condition in the market.

Special restrictions are imposed on the trading activities of directors, officers, and principal stockholders in corporations having equity securities registered on national securities exchanges. Any such person is required to report changes in his holdings of any equity securities of the corporation; and in order to prevent the unfair use of confidential information, he is required to account to the corporation for profits realized by him from any purchase and sale or sale and purchase, within a period of less than six months. He is forbidden altogether to effect a short sale of any equity security of the corporation. This is perhaps the most controversial and certainly the least popular provision of the Act among corporate officials.

CONTROLS OVER CREDIT

To prevent the excessive use of credit for the purchase and carrying of securities, the Board of Governors of the Federal Reserve System is authorized to prescribe the maximum amount of credit which may be extended and maintained on any registered security. The Board is granted power to lower margin requirements when it deems necessary for the accommodation of commerce and industry, and to raise margin requirements when it deems necessary to prevent the excessive use of credit to finance transactions in securities. Under this latter power, the Board

eliminated margin trading for an indefinite period, effective January 21, 1946. Effective February 1, 1947, the Board reduced margin requirements to 75 per cent, applicable both to purchases of securities and short sales.

Exchange members, as well as brokers and dealers transacting business in securities through exchange members, may extend credit or arrange for the extension of credit to their customers on registered, unexempted securities only within the limits prescribed by the rules of the Board. They may not extend or arrange for the extension of credit to customers without collateral or on the collateral of unregistered, unexempted securities, except under special circumstances prescribed by the rules of the Board. Under the Board's rules no restrictions are imposed upon their extensions of credit without collateral or on any collateral whatever, where the credit is not to be used for the purpose of purchasing, carrying, or trading in securities.

SANCTIONS

Various sanctions are provided in this statute. A willful violation of any provision of the Act or any rule thereunder subjects the violator to criminal prosecution. Any person who willfully and knowingly makes a false or misleading statement in any document required to be filed is guilty of a crime. No person, however, is subject to the penalty of imprisonment for the violation of a rule, as distinguished from a provision of the Act itself, if he proves that he had no knowledge of the rule.

The Commission has broad powers to make such investigations as it deems necessary to determine whether any person has violated or is about to violate the Act or the rules. It is authorized, in its discretion, to publish information concerning any such violation. In case of contumacy by a witness or refusal to obey a subpoena, the Commission may invoke the aid of the federal courts to require his attendance and testimony and the production of his records. No person is excused from testifying or producing records before the Commission on the ground that the testimony or evidence may tend to incriminate him or subject him to a penalty or forfeiture; but if the privilege against self-incrimination is claimed, an individual may not be prosecuted or subjected to any penalty or forfeiture on account of any matter concerning which he is compelled to testify or produce evidence. This exemption, of course, does not extend to prosecution and punishment for perjury.

The Commission has authority, when it appears that any person is engaged or about to engage in a violation of the Act or of any rule thereunder, to institute proceedings to enjoin such violation. The Commission brings an injunction suit in its own name and through its own attorneys.

The Commission may expel or suspend a member from an exchange for a willful violation of the Act or the Commission's rules. Under this power, several prominent exchange members have been expelled for manipulation or for other violations.

The Commission is also empowered to transmit such evidence as may be available concerning any violation to the Attorney General who alone may institute the necessary criminal proceedings under the Act.

The Commission is authorized to suspend, for a period not exceeding twelve months, or to withdraw, the registration of a national securities exchange, if it finds that such exchange has violated any provision of the law or any rule of the Commission, or has failed to enforce, so far as is within its power, compliance therewith by a member or by an issuer of a registered security.

The Commission is further authorized to suspend for a period not exceeding twelve months, or to withdraw, the registration of a security if it finds that the issuer has failed to comply with any of the requirements of the Act or the rules of the Commission. It also has power, if in its opinion the public interest so requires, summarily to suspend trading in any registered security on a national securities exchange for a period not exceeding ten days.

With the approval of the president of the United States, the Commission may summarily suspend all trading on any national securities exchange for a period not exceeding ninety days. Thus far, this power has never been exercised.

There is considerable force in the civil sanctions provided by the Act. Any person who willfully participates in any act or transaction in violation of the prohibitions against manipulation of securities prices is liable to any person who buys or sells a security at a price which was affected by such act or transaction. Any person who makes a materially false or misleading statement in any document filed pursuant to the Act or any rule thereunder, is liable to any person who, in reliance upon such statement and without knowledge of its false or misleading character, buys or sells a security at a price which was affected by such statement; unless the person sued proves that he acted in good faith and had no knowledge that his statement was false or misleading.

Every contract made in violation of the Act or of any rule thereunder, and every contract the performance of which involves a violation thereof, is void as regards the rights of the violator or any other person who acquired any right thereunder with knowledge of the facts. Any condition, stipulation, or provision binding a person to waive compliance with the Act or the rules of the Commission is void.

D. STATE REGULATION

The term *blue-sky laws* is popularly applied to state statutes designed, each in its own way, to protect investors from fraud. Prior to their general adoption, fraudulent promoters reaped a harvest among the gullible with the most fantastic projects the human mind could conceive. The sky was the only limit to their claims; and, indeed, they did not hesitate to exploit the profit-making opportunities of the sky itself.

If this statement seems extravagant, it is only because there were actually no limits to the guilelessness of the American investor. This may be illustrated by describing two schemes which flourished almost continuously before the adoption of the blue-sky laws and which still crop up now and then, but at less and less frequent intervals.

In Chicago some years ago, eight men were convicted for using the mails to defraud 70,000 persons through a scheme that has been practiced with success for over 200 years. It is the venerable Sir Francis Drake swindle. The legend is that the famous Elizabethan buccaneer, who died in 1596, left an estate amounting to a sum of 20 billion pounds which was plundered from Spanish treasure ships and is now lying about somewhere waiting to be collected by his rightful heirs. The chief defendant in the Chicago case claimed to have found a direct descendant and heir of Sir Francis Drake, who had assigned to him all rights to the estate. He promised a return of \$5,000 for every dollar invested, although occasionally, in an excess of caution, he modestly stated that the return would be "so much that you cannot believe it." He represented that the governments of Great Britain and the United States were busily engaged in arranging for the delivery of the estate to him. Again and again, the existence of any such estate has been proved a preposterous fable. Yet 70,000 persons paid this particular group over \$1,300,000 for shares in it.

When the trial was held in Chicago, the main defendant was already imprisoned in Leavenworth Penitentiary, having been convicted for perpetrating the same swindle in Iowa. This, however, did not discourage his ingenious salesmen. Their victims were informed that the government had taken over their leader's business and was conducting it for him. In fact, it was advertised that "the settlement of the estate would have been made sooner if Hoover had been re-elected, because new government leaders under President Roosevelt were unfamiliar with the work and had to be informed."

In Michigan several years ago two men were convicted of violating the blue-sky laws in connection with a nation-wide estate scheme called the *Heirs to the Patentees of the Town of New Harlem, Inc.* The promoters offered investors an opportunity to acquire an interest in 2,500 acres of

upper Manhattan Island valued at \$2,000,000,000 including such odds and ends as public parks, produce markets, and suspension bridges. The title of the estate depended on the premise that the rich acreage had been granted to early settlers back in 1666 and that millions of dollars had been placed in escrow in New York banks to be paid to the settlers' blood heirs as soon as the courts authorized payment. Duped by that tale, thousands of investors built "heir" castles at a cost of \$30 per share and a monthly assessment of 75 cents. Over 700 persons in Detroit alone were victims of this grotesque scheme.

DEVELOPMENT OF BLUE-SKY LAWS

Legislation governing the issuance of securities was, to some extent, established on the European continent by the beginning of the twentieth century, and in Great Britain at the turn of the century. Prior to 1911, however, no American state had any general law on the subject, except in respect of public utility and railroad securities.

The first blue-sky law was adopted in Kansas in 1911. It required investment companies to file with the designated state agency a full description of their business, and prohibited their selling securities in the state until and unless authorized by the bank commissioner. An immediate result of the passage of the law was the revelation of an amazing condition in respect of securities offerings. During the first year of its operations, approximately 1,500 applications for permits were filed, of which about 75 per cent were rejected as fraudulent and about 11 per cent as highly speculative.

In rapid succession during the ensuing two years, 18 other states adopted similar statutes. Promoters in such states were naturally alarmed at this wave of legislative interference with their freedom to sell securities at will. Steps were taken to test the constitutionality of many of the laws. In Michigan, West Virginia, and Iowa the courts declared their respective blue-sky laws unconstitutional, largely because the statutes were impracticable and hastily drawn. For several years, the ultimate fate of the laws was in doubt. The doubt was finally resolved by the United States Supreme Court in 1917. In a series of decisions, that court held the blue-sky laws of various states a proper exercise of the police powers of such states and therefore constitutional.

The decisions of the United States Supreme Court gave impetus to the widespread adoption by states of laws governing the sale of securities within their borders. By the year 1919 blue-sky legislation had been enacted in 32 states. Today, every state except Nevada has some type of securities statute.

STATE AND FEDERAL JURISDICTION

Although the United States Supreme Court sustained the constitutionality of blue-sky laws enacted by the several states, it likewise imposed certain limits upon the jurisdiction of the states. It declared that a state's jurisdiction was confined to its own borders and that such jurisdiction did not extend to the sale of securities within the borders of the state from a point outside the state, through the use of the mails or the instrumentalities of interstate commerce. Transactions which involved the crossing of state lines were held to be in interstate commerce and exclusively subject to the jurisdiction of the federal government.

As a consequence, it became fashionable among fraudulent promoters during the 1920's to conduct their operations by establishing a base in one state from which telephone and telegraph communications and letters were transmitted to prospective victims residing in other states. This condition contributed largely to the spawning of the "boiler-room operators," the "dynamiters," and other light-fingered gentry whose daily activities on the telephone followed the westward course of the setting sun. The inability of state enforcement agencies to cope with fraudulent interstate transactions was a major factor influencing the adoption of the Securities Act of 1933 and the Securities Exchange Act of 1934.

Neither the Securities Act of 1933 nor the Securities Exchange Act of 1934 was designed to interfere, in any way, with the operations of the state laws. The Constitution has attempted to establish livable relations between the federal and state governments. This means state control of state affairs and federal control of interstate affairs. The state has police power which it may exercise for the protection of the health, morals, and safety of its people and which, but only incidentally and indirectly, may impose burdens on interstate commerce. The federal government, within the scope of its authority, has police power over interstate commerce, which may, but only incidentally and indirectly, impose burdens on state commerce. The exercise of this police power by each government is a measure of tolerance to fit into our dual form of government. Beyond that, each government is supreme in its own sphere. The Securities Act of 1933 specifically provides that nothing in the Act shall affect the jurisdiction of the securities commission of any state over any security or any person.

TYPES OF BLUE-SKY LAWS

In general, state securities statutes may be classified into the following groups: laws requiring the registration or licensing of dealers, brokers and other distributors; laws requiring the registration of securities; and laws of the antifraud type, which simply prescribe penalties for the fraudulent

sale of securities and provide injunctive proceedings to protect the public from fraud or threatened fraud. In the great majority of states, the statutes combine the regulatory features in the first two categories above mentioned.

REGISTRATION OR LICENSING OF DEALERS, BROKERS,
AND OTHER DISTRIBUTORS

In 39 states, the blue-sky laws prescribe a form of registration or licensing of dealers and/or brokers. The laws generally provide for registration upon a satisfactory showing that the applicant is of good repute and financially responsible, that the proposed plan of business is not unfair or inequitable, that the applicant intends to conduct his business honestly and fairly, and that the securities which he proposes to distribute will not work a fraud on purchasers. The laws also seek to elicit sufficient information to enable prospective purchasers to form a judgment of the nature and value of the securities to be offered by distributors. Provision is usually made for the filing of information which enables the administrative agencies to keep the activities of dealers and brokers under scrutiny and to locate them if and when their presence is desired.

In 21 of such 39 states, dealers and/or brokers are required to file bonds as a condition to registration, the amounts of which range between \$5,000 and \$25,000. In some states, satisfactory proof of financial responsibility is accepted in lieu of the filing of a bond.

Under some laws, the administrative agency is authorized to require a registrant at any time to file a list of securities which have been offered or are being offered for sale, together with all advertising circulars and any other pertinent facts concerning the securities which will enable the administrative agency to investigate the offering.

Registration or licensing fees range between \$1 and \$100 and average about \$39. In most states the registration or license expires annually, and the fee, or some portion of it, must be paid annually.

In some states, such as New York, registration is accomplished by the simple filing of a statement containing a limited amount of information respecting the dealer or broker. In other states it is not accomplished until the administrative agency issues either a certificate of registration, a license, or a permit, whichever the law prescribes. In several states a separate permit must be obtained by the dealer or broker in connection with each issue of securities which he proposes to sell.

The scope of the laws is generally broadened and rendered flexible by including in the definition of "dealer" any individual, firm, or corporation engaged in selling or offering securities for sale. Regulation of foreign

dealers is achieved through a requirement for the filing of a consent to service of process on the administrative agency in any action based upon or arising in connection with the sale of securities in the state.

In 42 states the laws require some form of registration or licensing of salesmen, agents, and solicitors. The registration or licensing fees here range between \$1 and \$15. These fees, in most states, are likewise payable annually for renewal of the registration or license. In 6 states bonds must be filed by salesmen, agents, and solicitors as a condition to registration or licensing; these bonds range in amount from \$500 to \$5,000.

The administrative agency is generally vested with authority to cancel or revoke the registration or license of a dealer, broker, or agent, for proper cause, after reasonable notice and opportunity for hearing. It is also authorized to apply for an injunction restraining any person from engaging in any fraudulent practice or committing any act in violation of the blue-sky law, and to apply for an indictment against any person who has violated the law.

Occasionally a state has manifested a tendency, through the registration or licensing device, to protect local dealers and brokers from out-of-state competition. This is done by imposing a requirement that an applicant for registration or licensing must have been regularly engaged in business within the state for not less than a prescribed period of time. Such requirements have been sharply criticized by the industry at large, upon the ground that the purpose of the blue-sky laws was to protect the public against fraud and not to protect the local dealer against competition, and upon the further ground that no artificial barriers should be imposed upon the free flow of legitimate securities into all parts of the country.

REGISTRATION OF SECURITIES

In 43 states, the blue-sky laws require the registration of securities before they may be sold within the respective borders of such states. These laws usually make it unlawful for a person, firm, or corporation, either as principal or through brokers or agents, to offer securities for sale without the filing of certain information with the administrative agency of the state.

The registration requirements of the blue-sky laws are of two kinds: registration by notification and registration by qualification. Registration by notification is limited to certain classes of securities. Most frequently, registration by notification is permitted for securities of "going concerns" which have been in continuous operation for a prescribed period of time (usually from two to five years), which have been earning a prescribed net income, and/or which have a prescribed amount of net assets. Other types of securities to which the privilege of registration by

notification is accorded include issues secured by first mortgages on real estate, issues secured by first liens on pledged collateral meeting statutory requirements, and a few other miscellaneous categories of securities. The procedure for registration by notification usually requires the filing of a statement containing the name and address of the issuer; a brief description of the securities to be offered; the amount of the issue; the amount to be offered in the state; the offering price; a copy of the prospectus to be used in connection with the offering; and a statement of facts showing that the issue is entitled to registration by notification. The filing of this information, accompanied by the proper fee, constitutes the registration of the security and thereupon the security may be sold in the state without the issuance of a permit.

Registration by qualification is required of all securities which are neither exempt under the law nor entitled to registration by notification. The procedure for registration by qualification requires the filing of a registration application which embodies not only the information required for registration by notification, but also statements, exhibits, and documents concerning the issuer's business in far greater detail. The applications are examined by the administrative agency to determine whether the sale of the securities would be fraudulent or would tend to work a fraud. The securities may not be sold until a specific permit is granted or until an entry is made in the Register of Securities. In a few states, provision is made for the sale of the securities pending qualification, usually upon condition that the proceeds of sale be escrowed until the securities have been qualified, and that such proceeds be returned if qualification is refused. Some registrations expire at the end of one year and others when the amount of securities covered by the application has been sold.

ANTIFRAUD LAWS

In four states, namely Delaware, Maryland, New Jersey, and New York, there has been a drift away from the type of securities law which requires information as to the security in advance of the offering. The drift has been toward the antifraud law, which is distinguished from the ordinary blue-sky law in that the enforcement agencies are not authorized to regulate the sale of securities in advance, but are authorized only to enjoin fraud or threatened fraud, or to prosecute the perpetrators of fraud, in connection with the sale of a security. A state official, usually the attorney general, is vested with broad powers to investigate any security or security transaction which appears to be fraudulent. For this purpose, he has the power of subpoena to examine documents and question witnesses, and may bring proceedings to enjoin the sale of securities or may institute criminal proceedings to punish violations of the law.

EXEMPTIONS UNDER BLUE-SKY LAWS

Most blue-sky laws provide for the exemption of certain types of securities and of certain types of transactions from the statutory requirements. Spotted through the various laws are found about 23 types of securities which are altogether exempt from the operation of the respective laws. The most important, from the standpoint of the frequency with which they appear in the various laws, are securities of certain types of issuers, and securities having certain qualifications, as set forth in the following list:

1. Banks.
2. United States and Territories.
3. States and political subdivisions.
4. Real property mortgage bonds or notes.
5. Trust companies.
6. Public utilities and railroads.
7. Securities listed on exchanges.
8. Foreign governments and their public taxing subdivisions.
9. Corporations organized under acts of Congress.
10. "Legal" investments.
11. Securities issued in mergers or reorganizations to existing security holders or creditors.
12. Domestic corporations.
13. Insurance companies.
14. Building and loan associations.
15. Cooperative associations.
16. Securities outstanding for a specified term with no defaults in principal or interest.
17. Public utility holding corporations.
18. Nonprofit organizations.
19. Securities listed in standard manuals.

It should be emphasized that not every state blue-sky law contains all of these exemptions. Certain of the exemptions specified above are found in many of the blue-sky laws, but some are found in only a few of the blue-sky laws. Thus, in order to determine whether a particular security is exempt, it is necessary to refer to the blue-sky law of the state in which it is proposed to offer the security for sale.

Virtually every blue-sky law contains a provision exempting isolated sales by or for the account of the owner of securities, where such owner is neither an issuer, an underwriter, nor a promoter. This exemption is usually destroyed if sales are made in the course of repeated and successive

transactions of a like character, so that there is, in effect, a distribution rather than an isolated sale or sales. Many of the laws also exempt the issuance of stock dividends and sales of additional blocks of stock to existing stockholders. Other types of transactions-exempted under the laws include judicial sales, receivers' and trustees' sales, and sales made exclusively to banks, insurance companies, trust companies, and other institutional investors or to professional securities dealers.

QUALIFICATION

When an underwriter is confronted with the necessity of qualifying securities in a number of states, his first step should be to ascertain whether any exemption is afforded in such states. Qualification under any considerable number of state laws usually involves much delay, uncertainty, and inconvenience.

The tests for the qualification of securities applied by state authorities differ in accordance with the requirements of their respective laws and also in accordance with their own predilections. The emphasis in some states is on the character of the persons involved in the distribution; in others, upon asset values; in others, upon earnings or earning power; and in still others, upon the investment as opposed to the speculative features of the securities. There are a few states where the policy pursued in granting or denying permits is not clearly discernible.

Many of the statutes provide for the filing of regular reports by the issuers after qualification has been achieved. In some states these reports are required annually and in others more frequently.

In virtually all states the administrative agency is vested with authority to suspend or prohibit the sale of any security if it is of the opinion that such sale would be fraudulent or would result in fraud. It is frequently provided that every sale or contract of sale made in violation of the statute is voidable at the election of the purchaser, who is entitled to recover from the seller the full amount of the purchase price with interest. Some statutes provide that sales made for an insolvent issuer render the seller guilty of embezzlement.

THE NEW YORK ANTIFRAUD LAW

The New York antifraud law is known as the Martin Act. The design of the Act is to prevent fraud in the sale of securities and in related transactions by vesting the attorney general with extensive powers of investigation, injunction, and criminal prosecution. The Martin Act applies to dealers, but the term *dealer* includes every person, firm, or corporation who engages, directly or through an agent, in the business of trading in securities in such manner that the securities are sold or offered to the

public in New York, or who deals in futures or market quotations or accepts margins. A corporation marketing its own securities directly to the public is a dealer under the Martin Act.

Transactions which are subject to investigation by the attorney general include the sale, promotion, negotiation, advertisement, or distribution within the state of any securities. Whenever it appears to the attorney general that in any such transaction any person has engaged, is engaging, or is about to engage in any fraudulent practice, he may make a complete investigation which includes the power to subpoena witnesses and to examine books and records. Whenever the attorney general believes that any fraudulent practice has been, or is being, or is about to be committed, he may apply for an injunction or he may institute criminal proceedings.

While the Martin Act is primarily an antifraud statute, it does provide for a simple form of dealer registration. No dealer may offer to sell securities to the public within the state until he has filed with the Department of Law a *Dealer's Statement* containing certain prescribed information. This statement must be supplemented, from time to time, to show any convictions or injunctions which may be entered against the dealer, and to show any changes in the personnel of partners, officers, or branch managers, or in the location of branch offices. Exemptions from the requirement of filing a *Dealer's Statement* may be granted by the attorney general to dealers offering securities which have been in existence for ten years without default in the payment of principal or interest; or securities which have been fully listed upon a New York exchange since January 1, 1925; or other types of exempted securities including some of those previously specified.

Every dealer is required to file the so-called *State Notice* with the Department of State for publication, prior to engaging in the business of selling securities to the public in New York. The *State Notice* merely sets forth the dealer's name and address and the names of the partners, if a partnership is involved. The dealer is also required to file a *Further State Notice* for each nonexempted issue about to be offered. The *Further State Notice* simply identifies the dealer, the securities, and the issuer.

LACK OF UNIFORMITY IN STATE LAWS

The lack of uniformity in blue-sky legislation imposes a considerable burden upon legitimate issuers, underwriters, and dealers. There has been some tendency on the part of the state authorities to seek greater uniformity in their requirements.

The National Association of Securities Administrators, an organization consisting of the officials administering the securities laws of the several

states, has drafted a uniform application form for qualification of certain securities which has been adopted by twelve states and, with some variation, by two others. Thus, an issuer desiring to qualify securities of the designated types in these states is merely required to prepare the same form of application for each such state. In a growing number of states the registration statement or prospectus filed under the Securities Act of 1933 is accepted as more or less complete compliance with the blue-sky law.

These tendencies toward uniformity and simplification of blue-sky requirements are highly constructive and should be encouraged by everyone who is interested in removing unnecessary burdens upon the free movement of securities throughout the country. The Investment Bankers Association of America, in particular, has been alert and vigorous in its constructive attempts to obtain uniformity and simplification of blue-sky procedure.

CONCLUSION

Like all law, the federal and state legislation in the field of securities has its imperfections. The limitations of the human intelligence considered, it must always be imperfect. At its best, the law is a developing and dynamic force, striving to accommodate itself to the multifarious and changing needs of a complex society. If it seems to work out badly in a particular instance, it should be remembered that there have been 999 others in which it worked out well. If, at times, compliance with the requirements of the law results in inconvenience, expense, and discomfort, it should be remembered that these are a small cost to pay for the incalculable benefits which the law has brought to the American investor and to the society of which he is so essential a part.

REVIEW QUESTIONS

1. What are the functions of:
 - (a) The stock broker?
 - (b) The securities dealer?
 - (c) The stock exchange?
2. What are the functions of the investment banker in relation to the issuer of securities; in relation to the purchaser of securities?
3. What had been the more common abuses in the performance of these functions (in 1 & 2) during the 1920's?
4. What were the chief purposes of the Securities Act of 1933?
5. What authority does the SEC possess to insure full, fair, and accurate disclosures in the registration statement and prospectus?
6. What are the principal arguments advanced against the type of disclosure required by the Securities Act of 1933?
7. What are the advantages to the prospective investor of full disclosure?

8. As used in the Securities Act of 1933, define:
 - (a) Security.
 - (b) Sale.
 - (c) Issuer.
 - (d) Dealer.
 - (e) Underwriter.
 - (f) Distribution.
 - (g) Promoter.
9. What constitutes "a controlling stockholder" under terms of the Act?
10. Who are considered to be "promoters" of the issue?
11. Under terms of the Act, what are the qualifications for an independent accountant?
12. What are the general requirements with respect to experts preparing any part of the registration statement?
13. What tests must an appraisal meet if it is not to be considered misleading?
14. What procedure is followed in registering a security with the SEC?
15. How is the filing fee computed?
16. When no amendments are required, how many days usually transpire between the date of filing and the effective date of registration?
17. Under what conditions may the Commission accelerate the effective date?
18. How soon after the date of filing is information contained in the registration statement available to the public?
19. What is the nature of the restrictions imposed by the Securities Act on contacting prospective investors prior to the effective date?
20. What is the purpose of the "cooling period" between the filing date and the effective date?
21. May offers to buy and offers to sell be made legally during the "cooling period"?
22. What is a red-herring prospectus, and what is its purpose?
23. What are the legal requirements of a red-herring prospectus?
24. Under what circumstances can the dissemination of red-herring prospectuses prevent acceleration of the effective date?
25. What effect do amendments to registration statements have on the effective date of an offering?
26. What potential danger exists in the SEC's power of acceleration?
27. What is the purpose of amendments to the registration statement filed before the effective date?
28. Under what circumstances are post-effective amendments filed?
29. Under what circumstances may a registration statement be withdrawn by the registration?
 - (a) Before the effective date?
 - (b) After the effective date?
30. What is the purpose of a prospectus?
31. What legal restrictions exist in the use of a prospectus?
32. Under terms of the Securities Act, what is included under the term "prospectus"?
33. What types of securities are exempt from the provisions of the Act?
34. What are the principal factors to be considered in determining whether a particular transaction involves a public or a private offering?
35. What types of security transactions are exempt from the registration and prospectus requirements of the Act?
36. What main types of sanctions are provided for the enforcement of the Act?

37. What were the principal reasons for government control being extended over:
- (a) Organized exchanges?
 - (b) Dissemination of adequate information about securities being traded?
 - (c) Trading activities of brokers, dealers, and corporate officials or insiders?
 - (d) Use of credit for speculation?
38. What manipulative practices were sought to be remedied by the creation of the SEC?
39. What are the three main operating divisions of the SEC?
40. What controls are exercised by the SEC over:
- (a) Exchanges?
 - (b) Listing?
 - (c) Unlisted trading privileges?
 - (d) Proxy solicitations?
 - (e) Brokers and dealers?
 - (f) Trading?
 - (g) Credit?
41. What powers are extended to the Commission to enforce its authority?
42. What are the limitations of state blue-sky laws?
43. In general, what are the requirements of state blue-sky laws for:
- (a) Registration or licensing of dealers and brokers?
 - (b) Registration of securities?
44. How do the antifraud laws, such as are in effect in New York and Delaware, differ from ordinary blue-sky laws of other states?
45. What types of securities normally are exempt from state blue-sky laws?
46. In general, what types of security transactions are normally exempt from state blue-sky laws?
47. What tests are applied by state authorities before qualifying securities for sale within the state?
48. What steps have been taken to create uniformity in the requirements of the various state blue-sky laws?

NASD AND SELF-REGULATION OF OVER-THE-COUNTER MARKETS

by Wallace H. Fulton, *Executive Director, National Association of Securities Dealers, Inc.*

THE National Association of Securities Dealers was incorporated in 1939. It began to function officially when the first meeting of its Board of Governors was held in January, 1940. But the history of this organization, with specific powers granted by Congress to establish and maintain high standards of commercial honor in the over-the-counter securities markets and "to prevent acts and practices inconsistent with just and equitable principles of trade," reaches much farther back than 1940. The underlying constructive forces which had helped to shape state legislation and which resulted finally in the enactment of a federal law providing for self-regulation of the investment banking and securities business had their origins within the industry itself.

First of all, what is meant by the over-the-counter market? Briefly, this market embraces all transactions in securities not made on stock exchanges. In size and diversity of issues dealt in, it is far greater than all the nation's stock exchanges. The underwriting and distribution of new corporate issues are accomplished through the mechanism of the over-the-counter market. Today, practically all the buying and selling of government, state, and municipal bonds and a majority of the transactions in corporate bonds is over the counter. Activity in preferred stocks and various specialized types of common shares and investment trust units is also largely over the counter. Only in the common stocks and perhaps the more speculative types of preferred stocks and bonds do stock exchange volumes exceed those over the counter. Although the over-the-counter market deals in listed as well as unlisted securities, its predominant concern is with new issues and the obtaining of capital necessary for private enterprises to develop and expand.

For many decades before the Code of Fair Practice was formalized by

law, the business of trading in over-the-counter securities had been carried on by voluntary observance of forms and customs that had become standard business practices over the years. Many of them had their parallels in rules and regulations by which stock exchange members were bound. These practical rules of fair play, even though unwritten, were nevertheless generally effective under the common-sense principle that anyone who failed to abide by them found himself ostracised by his own business community. They did not, of course, control the unscrupulous outer fringe of the business which followed no rules.

STATE REGULATION

The era of tremendous expansion after the first world war, the increasing prosperity of the country, and the widespread distribution of corporate securities among the rank and file of the people brought grave problems to the over-the-counter business in the field of ethics and business practices. The state blue-sky laws attempted to curb these evils by controlling the issuance of new securities and by other legislative measures. These laws differ widely from state to state. They may be roughly classified under two types: first, the antifraud statutes which provide penalties after the fraudulent securities are sold; and second, laws which seek to prevent the issue of fraudulent securities by requiring that information concerning the proposed issues be filed with state commissions which have broad discretionary powers. Both of these types of state regulation have done excellent work in safeguarding investors. They are, however, limited in their powers. They cannot control the sale of securities inside their own borders by firms which operate in other states. Such interstate sales come under federal jurisdiction. This limitation in the power of states led some experts on the subject to suggest a federal law to apply to the sale of interstate securities. The idea gained impetus in 1928 when the federal government, through the agency of the Interstate Commerce Commission, took over direct supervision of security issues of all interstate railroads.

FEDERAL REGULATION

The prosperity of the 1920's had its culminating peak in the great bull markets of 1928-1929. The catastrophic collapse in October, 1929, and the series of financial and industrial crises of the next few years, provided a crucial test for the securities business and proved its ability to survive. Many factors of national and world-wide import contributed to the debacle of the security markets and the ensuing depression. It was inevitable in this crisis that Congress should turn its attention to the problems which confronted the country. Senate investigations in 1932 and 1933 covered the fields of money, credit, and securities, the activities

of listed markets, and especially those of the New York Stock Exchange. Federal legislation followed which embodied many of the unwritten standards of conduct which the securities business had practiced for years.

The Securities Act of 1933 requires, among other things, registration of new issues with the Securities and Exchange Commission. The registration statement must contain a truthful disclosure of all pertinent facts concerning the offering and the issuing company. Originally, the registration was made with the Federal Trade Commission, but an amendment to the Securities Exchange Act of 1934 transferred these duties to the SEC. In selling new issues, the Act requires that a prospectus containing full and accurate information on the offering shall be furnished each buyer before the transaction can be completed. Federal, state, and municipal issues are exempted under the act, as well as railroad securities and certain other classifications. The law provides for liability on the part of the issuer, each underwriter, many executives of the company which offers the issue, all members of the board of directors, and accountants, engineers, appraisers, and the like, who may certify to any part of the registration statement. At first some of the rigorous requirements of this law alarmed the investment banking business. Compliance was costly and burdensome and it was feared that the drastic liabilities imposed would tend to check the flow of private investment capital into worthwhile issues. Amendments to the act which lightened the burdens somewhat were made in 1934. In the main, the great advantages of the law, by eliminating questionable offerings and giving investors added confidence in the sound financing of new issues, are generally considered to outweigh the burdens which have been imposed.

The Securities Exchange Act which followed in 1934 was designed as a further protection to investors. This Act seeks to improve the manner and extent to which credit is used in security trading, the machinery of stock exchanges, the character of corporate information which is made available to investors, and the quality of over-the-counter transactions. Under this law, all underwriters, distributors, dealers, traders, and brokers who engage in over-the-counter activities—with the exception of those who deal exclusively in tax-exempt securities or confine their business within the borders of a single state—must register with the SEC and come under the supervision of the law.

THE CODE OF FAIR PRACTICE

Before the 1934 Act was passed, however, NRA, with its industrial codes, had got under way. In 1933 the investment banking business formulated its Code of Fair Practice which was approved by practically all the outstanding firms in the country. In its plan for self-regulation of

the investment banking business, the Code committed every member who joined the organization "to observe and to use his best efforts to maintain high standards of commercial honor in the investment banking business and to promote just and equitable principles of trade and business." Among the important provisions were: full investigation by the originator of new issues, with regard not only to the merit and soundness of the issue but also to the proper safeguarding of investors; adequate information on all new issues to be provided the investor in prospectus form; continuing and detailed information regarding the financial condition of an issuer to be provided the investor so long as any material part of an issue was outstanding; supervision of all correspondence and selling methods of salesmen by the employing firms.

The investment banking business had about eighteen months of experience, not altogether satisfactory, under NRA before the Supreme Court invalidated the Act. With that decision all industrial codes ceased to exist. In the period of business confusion which followed, the Investment Bankers Code Committee, feeling that some form of self-regulation was highly desirable and might still be achieved, met with the SEC and offered to cooperate with it on a voluntary, unofficial basis in the solution of problems in the over-the-counter business. Joseph P. Kennedy, first chairman of the Commission, welcomed the offer. The Code Committee then circularized all investment bankers, brokers, and dealers registered under the code and asked whether they wished the organization to be continued, looking toward self-regulation. Over 90 per cent of those who replied voted in the affirmative and agreed to support the organization financially. The Investment Bankers Code Committee was renamed the Investment Bankers Conference Committee.

WORK OF THE INVESTMENT BANKERS CONFERENCE COMMITTEE

One of the first acts of the new organization was to appoint a special committee to draft a permanent plan of self-regulation for submission to the business and to SEC. The committee met with James M. Landis, then chairman of the Commission, and the whole question of self-regulation was discussed, as well as the type of federal legislation that would be required to implement the undertaking. The result of the discussion was that Chairman Landis asked the committee to draw up "an idealistic plan, without regard to political expediency or existing legislation."

The plan which was devised incorporated major features of the investment banking code, including a provision that members who joined the organization would do business with each other on preferential terms which would not be extended to nonmembers. The first draft was submitted to a larger committee which made some changes. It was then sent

to members of the organization and to all district committees for further constructive revisions, so that the end product as finally evolved was not the work of a secret blue-star chamber but a plan which was thoroughly representative of every phase of the business and every section of the country. The final draft was then submitted to the SEC. At that time, however, federal legislation to implement the project was not deemed advisable and so the informal discussions went on.

During this interlude the Conference Committee, though without official status, was very active, arbitrating and settling disputes within the industry. It was also called upon to consult and cooperate with the SEC in the drafting of its rules and regulations. It should be remembered that this was a period of great political tension and bitterness. Men of honest convictions in government and in business were violently opposed to one another, not only on methods but on basic principles of government. It required cooperation of the highest order to hold these warring elements together and to work out a constructive course of action. The merit of this cooperative method of solving problems was demonstrated in the over-the-counter rules. Through its consulting and technical advisers, the Conference Committee was very helpful in securing final adoption by the SEC of over-the-counter rules which have proved practical and workable. Among other subjects on which the Conference Committee gave constructive advice were the segregation of brokers and dealers, registration of securities not listed on exchanges, problems connected with trading in when-issued securities, and various phases of operation linked with the issuance of new securities. All these tasks, to which the conference members were able to bring the knowledge and experience of trained businessmen, reveal how profound was the influence of this organization throughout that important period when the whole concept of federal legislation providing for self-regulation of the business was still in a fluid, uncrystallized stage.

THE MALONEY ACT

Equally important in its influence was the active participation of committees established on a community, state, or regional basis. The continuous cooperation was vital to the success of the undertaking. The fact of the matter is that from the first day's work on the investment bankers' code back in 1933 to our present status under NASD, the essential power which has enabled us to operate has been supplied by local committees throughout the country.

In October, 1937, the business learned that self-regulation under federal auspices was at length to be accomplished. Consultations with the SEC were begun toward that end. Within a relatively short time a first draft

of the proposed legislation was ready for confidential discussion. Conferences on this draft and subsequent redrafts were carried on over a period of several months in late 1937 and the early days of 1938.

Finally, on January 18 of the latter year, an amendment to the Securities Exchange Act of 1934 was introduced in the Senate by the late Senator Francis T. Maloney from Connecticut. Its title read:

A Bill

To provide for the establishment of a mechanism of regulation among over-the-counter brokers and dealers operating in interstate and foreign commerce or through the mails, to prevent acts and practices inconsistent with just and equitable principles of trade, and for other purposes.

Senator Maloney, as a layman with a long acquaintance with the problems of regulation of the securities business, had this to say about the underlying purpose of the legislation:

. . . There can be no large group of people engaged in any industry enjoying potentialities of profit, which does not attract the careless or the greedy few who bring discredit upon the entire group unless prevented by regulation from so doing. It is with this problem of imposing proper standards of business conduct upon that small minority . . . that we have all been wrestling for years.

The machinery of the (securities) business is delicate. It can be dislocated either by corruption from within or by unwise and burdensome regulation from without. Our task is to prevent the former without risk of the latter. The [Maloney] Act provides a formula designed to accomplish that result. This formula is predicated upon the principle that corruption from within, so far as possible, should be prevented from *within* and that external restraints should be rendered unnecessary as a result of self-restraint.

William O. Douglas, then chairman of the Securities and Exchange Commission, publicly advocating legislation of this kind, said that

the pattern is simply that provided by the Congress for the exchanges in the Securities Exchange Act of 1934. That is the type of regulation envisaged here, nothing more and nothing less. These associations [to be formed under the legislation] should have power similar to power possessed by exchanges and be subject to comparable supervision and regulation by the federal government.

The late George C. Matthews, who appeared as spokesman for the Commission on the Maloney Act in hearings before the committees of the Senate and the House, made it clear in his testimony that the choice was between cooperative self-regulation of the over-the-counter business or minute, detailed, and exacting regulation by the federal government. He added that, speaking for the Commission, "such a prospect would be scarcely more agreeable to us than I imagine it would be to the brokers and dealers of the country."

While the legislation was before Congress, various meetings of representatives of the business were held throughout the country and resolutions were passed which, while unanimously approving the prime objective of the bill, took issue with certain of its provisions which were considered impracticable. In a problem so complex, involving a pioneering experiment in the field of cooperation between business and government—and, more concretely, cooperation between government and the securities business which is admittedly one of the most technical, complicated, and important fields of effort in the whole system of American enterprise—disagreements were inevitable. But the conference method of sitting down together around a table, and talking problems over man to man, again proved its effectiveness. Differences were ironed out or submitted to arbitration. Many suggestions and revisions were taken care of in this way and the mechanism of self-regulation was appreciably improved as a flexible and practical instrument. It was the same kind of transmutation which occurs when a new appliance or mechanical device is tried out by experts in the workshop “to get the bugs out of it,” as they say. In June, 1938, the Maloney Act, setting forth a new concept of business-government cooperation in the public interest, was passed by Congress, signed by the President, and became law.

The history of this legislation is significant because it demonstrates the gradual development of business standards which in time become codes of conduct, unwritten but commonly accepted by honest people, and are finally crystallized into law. Fortunately, this was no hasty legislation. Between 1934, when the Securities Exchange Act was passed, and 1938, when the Maloney amendment to that law was made, four years had elapsed, which allowed time and constructive vision to perform their beneficial tasks.

THE ORGANIZATION OF NASD

After passage of the Maloney Act which provided for registration of national as well as affiliate organizations formed along geographical lines, a number of exploratory discussions took place to determine what organization—or organizations—should be created to carry out the objectives of the law. At length the way was paved for the over-the-counter business to realize its goal. The Conference Committee was succeeded by the National Association of Securities Dealers. There followed the arduous tasks of framing by-laws, rules of procedure and of fair practice, and readying the new organization for action. It was incorporated in Delaware in 1939, registered with the SEC, and began to function in January, 1940, as the sole regulatory body of the over-the-counter business.

In its organization, the Association gives free play to the natural genius

and initiative of its members in handling local affairs, under the checks and balances provided by the rules and regulations. For administrative purposes, the country is divided into fourteen districts, each of which, with its own elected officers, is responsible for promoting the objectives of the organization in that area. The general management of affairs is vested in a national Board of Governors elected by the membership. All new rules, regulations, and amendments must first be submitted to members and approved by a majority vote. These checks and balances are designed to prevent domination by any one special group.

In addition to the elected officers, all of whom serve without pay, the Association has an executive director and staff who receive compensation, and the districts have secretaries and other employees. This small group of paid personnel carries on the day-to-day operations of the organization and assures continuity. For, since the Board of Governors and district officers serve for three years, the voluntary personnel changes periodically.

Members of the Association pay the entire costs of administration. In order to make membership worth while and to give the organization power to function successfully, the Maloney Act contains a provision which reads:

The rules of a registered securities association may provide that no members thereof shall deal with any non-member broker or dealer except at the same price, for the same commission or fees and on the same terms and conditions as are by such member accorded to the general public.

This preferential treatment granted to members has always been customary on stock exchanges. On this subject William O. Douglas, at that time chairman of the SEC, stated:

. . . [The legislation] should also be implemented by according members of such associations preferential business advantages not inconsistent with the public interest, in dealings among themselves which brokers and dealers who are not members would not have. Here again, the pattern is persistently that of the exchanges which grant to members certain important business preferences. Some such business preference (properly safeguarded) is as necessary here as it is in the case of stock exchanges in providing adequate incentives for permanent organizations on a voluntary basis.

THE OBJECTIVES OF NASD

As stated in its certificate of incorporation, the objects of NASD are:

To promote through cooperative effort the investment banking and securities business, to standardize its principles and practices, to promote therein high standards of commercial honor, and to encourage and promote among members observance of federal and state securities laws;

To provide a medium through which its membership may be enabled to confer,

consult, and cooperate with governmental and other agencies in the solution of problems affecting investors, the public, and the investment banking and securities business;

To adopt, administer, and enforce rules of fair practice and rules to prevent fraudulent and manipulative acts and practices, and in general to promote just and equitable principles of trade for the protection of investors;

To promote self-discipline among members, and to investigate and adjust grievances between the public and members and between members.

One of these important aims is "to standardize principles and practices." NASD has accomplished this by providing the business with a code which covers settlement of contracts and trading practices in over-the-counter transactions. The National Uniform Practice Code is administered by recognised expert technicians, on a district as well as on a national basis. It covers all phases of the technical side of trading and settling contracts. Under it provision is made for the arbitration of disputes. These, however, considering the tremendous volume of business done by members over the years, have been few and far between. Although taken pretty much for granted, which is as it should be, this code is undoubtedly one of the best examples of the contributions NASD has made toward supplying the business with practical and sound methods of procedure.

Another aim is "to encourage and promote among members observance of federal and state securities laws." In this area the Association has had no problems. Even though the securities business is probably subject to more forms and varieties of regulation than any other business or industry, it is essentially law-abiding. This does not mean, however, that the business is not actively interested in the rules and regulations under which it must carry on. Experience through the years has shown that clearer regulations and more practical and businesslike rules are needed. The Association believes that the public interest, protection of investors, and the welfare of the business itself would be advanced by simplification and by an enlightened, nonpunitive administration of securities laws of all kinds. It is in this and related fields that the board of governors and special and district committees are constantly at work.

What has NASD done to promote high standards of commercial honor, "to adopt, administer and enforce rules of fair practice . . . and in general, to promote just and equitable principles of trade for the protection of investors"?

Here again the record reveals with what degree of success the Association has pursued these important objectives. Rules of fair practice, both of a general and specific nature, are subscribed to and become binding upon all members who join the Association. Foremost among these rules is the one which states: "A member in the conduct of his business shall

observe high standards of commercial honor and just and equitable principles of trade." This rule is the keystone of the arch of the whole fair practice structure. In addition, there are twenty-six other rules. They cover the responsibility of a member for recommendations made to customers, require that prices and commissions charged must be fair, specify his obligations with regard to quotations, his duties as a fiduciary and in handling discretionary accounts, and prescribe what is required of him in the way of disclosure as a broker or a dealer in his transactions with customers. The rules, of course, prohibit manipulative, fraudulent, or deceptive practices and improper use of a customer's securities or funds.

THE ENFORCEMENT PROGRAM

The enforcement program is the most important activity of the Association. It is a continuous process carried on every working day in every district throughout the country. Primarily it is accomplished through periodic examinations of the membership. A questionnaire is sent to every member at least once a year, and, should circumstances warrant, a special follow-up examination is made. In addition, staff examiners of the Association are continuously calling upon members, not only to review books and records but also to advise with them in a friendly and constructive manner on any problems that arise.

The Association is empowered under the Maloney Act to discipline its members for violation of rules by censure, fine, suspension, or expulsion. Under our democratic form of organization—which adheres closely to the pattern of this republic in its emphasis on local self-government—these disciplinary actions are initiated and handled in each local area by district Business Conduct Committees which have original jurisdiction over the proceedings.

The method of procedure of a district Business Conduct Committee reveals how strictly the rules of fair practice are enforced. The periodic examination of members by means of questionnaires and personal examinations shows how a member transacts his business. Through these reports the Business Conduct Committee determines whether a member is following the rules. Every one of these questionnaires must be carefully screened and analysed for violations. The violation may be merely technical and of minor consequence. It may be more serious. If it is serious enough to warrant further investigation, an examiner is sent out to inspect the firm's books and records. His report is then analysed. If it is decided to file a complaint, notice is sent to the member and the case comes up for a hearing. Throughout these proceedings there is no publicity. The reason is obvious. A man is held innocent until he is proved guilty, and the

slightest taint of suspicion from newspaper reports might damage his business reputation.

The procedure for handling complaints is carefully prescribed by the rules and regulations. The Business Conduct Committee must be actuated by good faith and fairness, free from malice or personal hostility. These proceedings are not courts of law with tugs of war between contending lawyers. The rules of fair practice are drafted by laymen; they are interpreted by laymen; the case is heard and passed upon by men engaged in the same business as the accused fellow member and familiar with local conditions. If the accused member is not satisfied with the decision of the local committee, he may appeal to the Board of Governors for a review of the case, or the Board may call it up on its own motion; if the member is not content with that decision, he may appeal to the SEC which also may, on its own motion, call up for review any decision of the Board of Governors. If the accused member still feels aggrieved, he may apply to the courts. All his rights as a citizen are fully protected. Any investor may make a complaint, or a member may complain against another member, or the Business Conduct Committee may initiate action.

The enforcement program does not depend on complaints from the public. Since the Association began to function in 1940, approximately 600 complaints have been filed against members, of which not more than a dozen originated with public investors. Although transactions with customers have been the bases for complaints, very few investors were ever aware that the dealer involved had been disciplined by his Association. In cases where the customer learned of the complaint, the knowledge was usually derived through restitution made by the dealer, either in repayment of charges found to be excessive or in cancellation of a contract.

FACT-FINDING STUDIES

It should be emphasized that examinations of members by means of questionnaires and personal examinations are not conducted solely to establish the existence or nonexistence of violation of the rules. As a matter of fact, the Association is more interested in preventing and anticipating possible infractions than it is in taking disciplinary measures after the trouble has occurred. These examinations are also made to obtain vital information on current practices which may be used in fact-finding studies and the formulation of new regulations to meet changing conditions. The exploratory, fact-finding method of approach to problems by means of special study committees in the districts has been used with success by the Association in the solution of many complicated and technical problems.

The value of this research method was clearly demonstrated in the pric-

ing policy worked out by the Association. As far back as 1942, our district committees and the Board of Governors were carefully studying the question of members' mark-ups in transactions with customers in order to determine, if possible, what was a fair profit or commission. This was a delicate and complicated problem because what might be considered fair in one transaction would be decidedly unfair in another. The securities might differ in character. Their availability in the market might not be the same, or the cost of obtaining them might vary. The price of one security in contrast to another, the amount of money involved in the transaction, the relationship of dealer and customer—all these varying factors enter into the problem. The question was constantly raised by our members and by Business Conduct Committees in the discharge of their duties: "What is a fair mark-up?" No arbitrary answer could be made for the simple reason that the price to the customer in any given transaction must always be considered in the light of all relevant circumstances.

However, it was recognised that the *amount* of mark-up was at least a starting point, and that progress might be made if the general practice throughout the business on this score could be established. To determine what the general practice was the Association, in 1943, made a membership-wide questionnaire examination of customer transactions. Over 60,000 principal transactions were reported. An analysis of these transactions revealed that 47 per cent were made at a mark-up or profit of 3 per cent or less, and 71 per cent at a mark-up of 5 per cent or less. These findings were reported to the members for their guidance. We were not attempting to work out any rigid and arbitrary rule but to establish a general policy or guide which members might find helpful in evaluating their many and complicated services to customers.

The effectiveness of the release of these figures to the membership, with the simple statement that a maximum mark-up of 5 per cent should be considered as a *desirable* objective, was clearly reflected in the analysis of questionnaires for the following year. In 1944 our studies showed that mark-ups of 5 per cent or less accounted for 82 per cent of the transactions analysed. Seventy-one per cent in 1943; 82 per cent in 1944. The 5 per cent *guide* was beginning to bear fruit. In 1945, nearly 90 per cent of the transactions analysed were made at a mark-up of 5 per cent or less.

These three-year studies to determine a pricing policy covered all types of corporate securities. Every section of the country was represented and every type of dealer, from small one-man firms to large underwriting and trading organizations. The objective was to arrive at facts on which to base a pricing policy which was fair to investors and fair to the business. The steady upswing to higher standards reveals how heartily the business

responded, once it clearly understood the problem and members had a guide which they could apply themselves. The studies also demonstrate that reputable dealers in securities operate at moderate profit margins. It should be added for the record that the Association does not seek to regulate profits of its members. It is devoted to the principle that members are entitled to a profit. Our interest is only with the *fairness* of the mark-up or commission charged.

SUPERVISION OF SALESMEN

If space permitted, studies in other fields might be mentioned, with their beneficial effects on the conduct of business. A single example must suffice. A number of valuable studies were conducted to ascertain a course of action for the proper supervision of salesmen by their employing firms. The sales force has always played a highly responsible and important role in the securities business. As the men who get the buy-and-sell orders, they account for the major part of securities turnover. The prosperity of the individual firm and of the business in general depends largely on their capabilities and trustworthiness. Their practices, if unethical, reflect discredit not only on the firm which employs them but on the business as a whole. As a result of a nation-wide study of salesman-customer transactions, a rule was worked out and approved by a majority vote which makes members directly responsible for the activities and methods of salesmen in their employ. Still another study on the same subject resulted in an amendment to the rules of fair practice in 1945. By this amendment, salesmen in the securities business as well as their employers are directly charged with responsibility under the code of fair practice and are held individually answerable for violations.

RESULTS OF SELF-REGULATION

The records of the districts reveal that year by year the number of formal complaints has gradually decreased. Quietly but effectively the regulation of business conduct by the members themselves goes on, lifting standards to higher professional levels. Certain types of disciplinary action have practically disappeared. Dealers who persist in flagrant violations of the rules have been expelled. The business is in a clean, sound, healthy condition, and the membership has every intention of maintaining that condition. The fiduciary relationship a dealer has with his customers has always been one of grave responsibility. Under self-regulation, with members enforcing their own rules, discussing problems of local self-government in committees and subcommittees throughout the country, that sense of responsibility to the public has deepened and quickened through the years. Day by day, progress seems imperceptible. But looking back across seven years of experience in self-regulation, it

can truthfully be said that there has been general improvement all along the line. This does not mean that the battle is won, for there is still plenty of room for further improvement.

The work of the district committees, upon which the success of this whole system of self-regulation rests, is not spectacular. For the most part, this labor is hidden, anonymous, time-consuming, and without money rewards. Self-regulation is not a magic formula which can accomplish miracles overnight. Like democracy, it is a man-size, lifetime job which must be worked at continuously, not only by the few but by all. It is this sense of individual responsibility, this year-in-year-out reliability on the part of the many, which accounts for our measure of success in the past—and will continue to account for it in the days which lie ahead.

REVIEW QUESTIONS

1. What is the over-the-counter market?
2. Trace the important developments of the past decade leading to the creation of the National Association of Securities Dealers.
3. What is the organizational structure of the NASD?
4. What are the objectives of the NASD?
5. How are the objectives of the NASD being accomplished?
6. How does the NASD enforce this program?
7. What are the principal objectives of fact-finding studies made by the NASD?

ACCOUNTING PROCEDURES OF INVESTMENT BANKING CONCERNS

by Financial Division—Arthur Anderson & Company

THE ACCOUNTING and related procedures and practices as followed by investment banking concerns must be designed not only to satisfy management and customer requirements but also to conform with the rules of various regulatory bodies. These bodies, which will be referred to herein from time to time, are: the Securities and Exchange Commission, the organized stock exchanges, National Association of Securities Dealers, Inc., the Board of Governors of the Federal Reserve System, and state securities departments.

It is intended that the subject of this article be covered in sufficient breadth to acquaint the prospective investment banker with certain fundamentals of the accounting and financial phases of the business, rather than to serve the expert accountant as a technical guide to accounting methods and detail.

Generally speaking, all dealers in securities, whether they are classified as investment bankers, brokers, or other types of dealers, follow similar accounting and financial practices and maintain the same general types of records. In many instances brokers perform investment banking functions; likewise, investment bankers sometimes act in the capacity of broker or dealer. For these reasons the term *dealer* is used throughout this discussion to refer to all classes of dealers in securities.

THE CASHIER AND THE ACCOUNTING DEPARTMENT

Accounting in the investment banking business involves both the cashier and the accounting department. The activities of the cashier assume considerable importance because of the nature of the business.

It is the duty of the cashier to receive and disburse cash and to receive and deliver securities in accordance with orders from the officials and other authorized persons. The cashier is responsible for all securities of the firm and for all securities for which the firm is accountable to others. He is also responsible for undeposited cash funds, frequently has author-

ity to make short-term bank loans, and is charged with the duty of segregating paid-for securities in accordance with instructions from the accounting department.

It is the duty of the accounting department to record properly all transactions in money and securities, or to see that they are properly recorded. In connection therewith, the accounting department prepares the various reports for management and regulatory bodies, keeps the necessary records to determine that proper margins are maintained on margin accounts, orders securities into segregation when paid for or when they represent excess collateral on margin accounts, prepares confirmations and statements of account for customers' transactions, and so forth.

Because the cashiering and accounting functions are closely related, in small organizations they may be performed by, or under the direction of, one person. However, when the size of the organization permits, these duties should be divided, where it is practicable, along functional lines to obtain a measure of internal control between the departments. In many cases it has been found most practical for the cashier's department to keep certain original records, such as the cashbook, subject to check of the accounting department. The personalities and abilities of the accounting personnel generally play an important part in determining the division of responsibilities and the duties of the various members of the organization.

RECORDS AND RECORDKEEPING

The records of a securities dealer are unique in that, in addition to accounting for all cash funds, a detailed accounting must be made of all securities coming into the control of the dealer, including items which belong to customers and others.

Generally speaking, the accounting records which a dealer in securities should maintain are as follows, and the Securities and Exchange Commission under the provisions of the Securities Exchange Act of 1934 has adopted them as requirements:

1. A daily record of cash receipts and disbursements, usually referred to as the *cashbook* or *cash blotter*.
2. A daily record of receipts and deliveries of securities, usually referred to as the *security blotter*.
3. A daily record of purchases and sales, usually referred to as the *purchase and sale journal*.
4. A record showing, by issues, all securities for which the dealer is accountable and the manner in which they are accounted for. This record is usually called the *position book* or the *long and short book*.
5. Ledger accounts, or other records, for each customer, showing transactions in both money and securities.

6. Ledgers, or other records, reflecting the following:
 - a. Securities in transfer.
 - b. Dividends and interest received.
 - c. Securities borrowed and securities loaned.
 - d. Monies borrowed and monies loaned (together with a record of the collateral therefor and any substitutions in such collateral).
 - e. Securities failed to receive and failed to deliver.
7. A general ledger showing all asset, liability, income, expense, and capital accounts. Accounts with customers and accounts with other dealers are usually reflected in the general ledger by means of *control* accounts, that is, accounts showing the aggregate of all the customers' accounts and all of the dealers' accounts.

In addition to the foregoing, it is required (1) that written memoranda be kept of all orders and instructions received from customers or other dealers and all orders and instructions transmitted within the dealer's own organization, and (2) that confirmations of orders, transactions, receipts, deliveries, and other items be prepared and forwarded to the proper parties.

Most dealers in securities maintain their accounts on a settlement-date basis. This means that purchases and sales are not recorded in the accounts until the settlement date, normally the third business day after the date of the transaction. Some dealers record purchases and sales on the transaction date, but they are in the minority.

Following is a general description of the work required to record typical transactions of a dealer in securities.

BUY AND SELL ORDERS

When a customer wishes to purchase or sell a security, the salesman prepares a buy or sell order giving the details of the transaction. After the transaction has been negotiated, the appropriate information is inserted on the buy or sell order, indicating the dealer from whom the security was purchased or to whom it was sold. The time of the transaction is also stamped thereon. In some cases, this information is recorded on separate memoranda with proper cross references to the initial buy or sell order.

CONFIRMATIONS

From the buy or sell order or other memoranda, a confirmation of the transaction is prepared in several copies. Copies are addressed to the customer and to the dealer giving all details of the transactions, such as date of transaction, name of security, price, amount, commission, tax, total purchase price or net proceeds, settlement date, exchange on which the transaction was negotiated, and so forth. The confirmations are prepared on the day of the transaction and the original copies thereof

placed in the mail that night for delivery to the customer and the dealer on the following day. The other copies are used for various purposes; one copy goes to the cashier to inform him of the transaction, and another copy goes to the accounting department for record purposes. Similar confirmations are received from the other dealers and are matched with the firm record of the transaction.

Unless the dealer records transactions as of the date thereof, the entries are made in the books of account as of the settlement date. Security transactions in firm-owned securities are usually recorded on a memorandum basis as of the transaction date in order to have a current firm position available.

RECEIPTS AND DELIVERIES OF SECURITIES AND CASH

If the customer is selling a security, he must deliver the certificates, duly endorsed, to the cashier in advance of the delivery or settlement date so that delivery can be made by the dealer on that date. A receipt is given to the customer by the cashier when the certificates are received; this security is entered in the security blotter at that time.

On the date agreed to with the purchasing dealer, the securities are delivered, together with certain transmittal data (a copy of which is used as a receipt from the purchasing dealer) to the purchasing dealer in exchange for a check for the proceeds of the sale. At that time, an appropriate delivery entry is made in the security blotter, and a *receipt* entry made in the cashbook or cash blotter.

The transactions are also recorded in the purchase and sale journal as of the settlement date. The entries show the sale by the customer and the purchase by the purchasing dealer, together with the details of the transaction, such as name of security, commission, tax, and so forth.

The transactions are subsequently posted from the security blotter and the purchase and sale journal (books of original entry). Only security transactions are posted to the security position ledger, but both security and money transactions are posted to the customers' ledger accounts.

If the customer is purchasing rather than selling a security, the reverse of the foregoing procedure takes place.

Until the certificates are delivered to, or upon the order of, the customer, his account will show him to own the securities, even though they may be in process of transfer. When the securities are delivered to the customer, a receipt is customarily obtained from him.

STAMP TAXES

Sales of stocks and bonds are subject to federal transfer taxes and also, in many cases, to state transfer taxes. Most of these taxes are paid in

the form of stamps which must be purchased and affixed to the stock certificates, confirmations, or other documents. The federal tax applies to transfers of legal title, with many exceptions such as transfers from the name of a decedent into the name of his executor, transfers into the name of a survivor of two persons holding stock in joint tenancy, and so forth. Transfers into the name of a nominee for purposes of collateral or otherwise are not subject to the federal tax. Since the federal tax applies to the transfer of legal title, it is payable by the seller of the security and it is customary to deduct the tax from the proceeds of the sale.

The federal stock transfer tax is computed at the rate of 5 cents for each \$100 of par value or fraction thereof or for each share of no-par value stock, except that the tax is increased to 6 cents per share if the stock is selling at \$20 or more per share. Bond transfer taxes are based on 5 cents per \$100 of face value or fraction thereof.

Generally speaking, the dealer is responsible for the proper payment of federal stock and bond transfer taxes on sales negotiated by him, and is required by the tax regulations to keep proper records of each transaction showing the details thereof, including the tax paid.

It is the duty of the cashier to affix and cancel the proper amount of federal stamps; however, this is simplified for members of several of the larger exchanges by having the clearing house purchase and cancel the stamps on the basis of daily reports submitted by member firms. The maintenance of proper records and the preparation of monthly returns is the duty of the accounting department. The accounting department should also review the work of the cashier to see that the proper amounts of taxes have been paid.

Many of the states also have stock and bond transfer taxes. The state of New York imposes a basic stock transfer tax of 2 cents per share which under certain circumstances may be only 1 cent and under other circumstances as high as 4 cents. In general, the New York tax is imposed on transfers consummated within the state. Like the federal tax, it is paid by means of stamp purchases.

INTEREST AND DIVIDENDS

Interest and dividends received on securities under control of, or in the name of, the dealer constitute another phase of the accounting function. Most of the interest on bonds is collected by cashing interest coupons. If bonds of a customer are in possession of the dealer, it becomes the responsibility of the cashier to clip and cash the coupons. The coupons are usually deposited in the bank and a check forwarded to the customer for the proceeds. The accounting department is notified by the cashier

so that appropriate entries can be made in the customer's account. Interest accrued at the time bonds are sold is shown in the confirmation, along with the sales proceeds, commission, and so forth, and the amount thereof is included in the settlement for the sale.

Dividends are paid to the stockholders of record as of the record date, irrespective of actual ownership. The stock may be carried in a dealer's name, even though it is not owned by him, for collateral purposes, because of lack of time to effect transfer, or for numerous other reasons. Hence, each dividend received by a dealer must be analyzed to determine the ownership of the stock on the record date. This is the responsibility of the cashier.

When a stock is sold shortly before the record date, the certificates may be in the name of the dealer, and there may not be sufficient time before the record date to have the stock transferred into the name of the new owner. In such cases, a *due bill* may be issued to the new owner by the dealer in whose name the security is registered. This would evidence the right of the new owner to the dividend which will be received by the dealer. The due bill is then redeemed by the dealer after the receipt of the dividend by paying cash upon presentation.

In some cases, the dividend is received by the dealer because the new owner has failed to have the certificates transferred into his own name. The dealer is not aware of this situation and frequently has no means of knowing who is entitled to the dividend. Ordinarily an analysis of the holdings of the dealer, both for his own account and for the account of the customers, is made as of the record date from the position book and other sources; in this way it can usually be determined who owns the stock on the record date. Whenever the ownership of any portion of the dividend received can be accurately determined, the cashier notifies the accounting department to credit the customer's account. The portion of the dividend which cannot be identified is ordinarily credited to unclaimed dividends in the general ledger.

Dealers or customers who did not receive the dividends they were entitled to because the stock was in the name of someone else on the record date, are required to make a written claim for the dividend. The claimant is required to give all pertinent data, including the certificate numbers of the stock and an agreement to indemnify the other party for any loss which may be suffered by honoring the claim. If investigation indicates the claim to be authentic, payment is made immediately.

GENERAL LEDGER

The general ledger of a dealer in securities is similar to that of any business enterprise; accordingly, it does not seem necessary to go into

the manner in which the ledger is maintained. It represents the basic financial record of the business conducted by the dealer. It carries accounts for the cash balances, security investments, other assets, indebtedness, capital, income, and expenses; or it may carry accounts which summarize similar items of each category, the details of which appear in subsidiary records. The general ledger is posted primarily from entries in the cashbook and purchase and sale journal, and is kept by the accounting department.

POSITION BOOK

The position book, or long and short book, is a key record of dealers in securities. It controls the securities in units in the same manner that a general ledger controls money balances. As a measure of internal safeguard, it is essential that the position record be kept in the accounting department, and that it be divorced as much as possible from the cashier or anyone else handling securities or cash. Similarly, money balance controls should also be separated from the cashier and others handling securities or cash. Reference to these records will be required from time to time by the cashier and his assistants, but they should not be permitted to make entries therein or otherwise change the records.

In order that the operation of the position book, which is unique to the securities business, may be better understood, Table 21 presents an example of such a record, together with explanatory notes regarding certain typical transactions. It should be understood that all figures shown are balances after reflecting transactions and are not the transactions themselves.

TABLE 21

The Position Book

ABC CORPORATION COMMON STOCK

	1947							
LONG	6/2	6/3 (a)	6/4 (b)	6/5 (c)	6/6 (d)	6/9 (e)	6/10 (f)	6/11 (g)
Customers—								
A	100	100	100	100	100	100	100	80
B	250	250	250	250	250	250	250	250
C	40	40	40	40	40	40	40	40
D	65	65	65	65	65	65	65	65
E	500	500	500	500				
F	20	20	20	20	20	20	20	20
H		100	100	100	100	100	100	100
I				18	18	18	18	18
Total customers	975	1,075	1,075	1,093	593	593	593	573

Firm	10	10	10	10	10	10	10	10
Fail to deliver—								
Broker X	10	10	10	10	10			
Broker Y					500			
TOTAL	<u>995</u>	<u>1,095</u>	<u>1,095</u>	<u>1,113</u>	<u>1,113</u>	<u>603</u>	<u>603</u>	<u>583</u>
SHORT								
Box	200	200	200	200	265	265	225	225
Safekeeping box	600	600	600	718	718	218	258	238
Collateral on loan	65	65	65	65				
Fail to receive—								
Broker Y	20	120						
Transfer	100	100	220	120	120	120	120	120
Customer—								
G	10	10	10	10	10			
TOTAL	<u>995</u>	<u>1,095</u>	<u>1,095</u>	<u>1,113</u>	<u>1,113</u>	<u>603</u>	<u>603</u>	<u>583</u>

(a) Purchase of 100 shares by Customer H. through Broker Y, broker, on May 28 for settlement on third succeeding full business day, June 3.

(b) Received 120 shares from Broker Y and forwarded them to transfer office for transfer.

(c) Received 100 shares from transfer and placed them in safekeeping. On the same day 18 shares were received from Customer I for sale (these were also placed in safekeeping).

(d) Customer E sells 500 shares on June 3, settlement date June 6, through Broker Y. On June 6 the bank loan is paid and the collateral received from the bank and placed in the box.

(e) Customer G delivers the 10 shares he was short. These shares are then delivered to Broker X. Delivery is also made on the 500 shares mentioned under (d) from safekeeping.

(f) Customer C pays his account and the 40 shares are placed in safekeeping in accordance with notification from the margin department.

(g) Delivery is made to Customer A of 20 shares in safekeeping for this account.

REPORTS

One of the primary functions of the accounting department is to provide the data for reports to management, customers, and regulatory bodies. The accounting department should be so organized that periodic reports on operating results and financial position can be rendered promptly to management. These reports, which are usually prepared monthly, should include a statement of profit and loss, a balance sheet, schedules of firm investments, and supplementary data of any kind that may be of use to management.

Reports to customers usually include monthly statements of account, statements of open orders, confirmations of consummated orders, and so forth. The New York Stock Exchange requires member firms to make available to customers upon request a statement of financial condition as of the date of its most recent answer to the financial questionnaire of the Exchange.

A considerable number of detailed reports as well as answers to ques-

tionnaires must be prepared for the various regulatory bodies. These reports are described at greater length in a subsequent section.

INTERNAL AUDITING

As a result of the volume of records and information required, it has become a major task of the accounting department to determine that the records are accurately kept. For this reason, most dealers have adopted programs for constant review, cross check, and internal audit of their records. For example, monthly statements are mailed to customers showing security and money balances per company records and requesting notification of any exceptions noted by the customer, securities actually in the box are periodically counted against the quantities shown as *box* items by the position book, and so forth.

Details of this important program need not be further amplified herein, but a substantial amount of clerical time is required to carry it out properly.

DISTRIBUTION OF SECURITIES

The economic function of security dealers may be summarized as (1) arranging for the sale of new securities and refinancing of existing securities; and (2) facilitating the transfer of ownership of securities. The first function is performed in the capacity of an investment banker and the second as a broker or dealer, depending upon whether the transaction is effected as agent or principal, although many firms serve in both capacities.

The underwriting of a new security issue may result either from competitive bidding on the part of several investment banking groups or from direct negotiation by the issuer with one investment banking group.

The functions of an investment banking firm acting as manager of the underwriting group would consist of completing negotiations with the issuer of the securities, organizing a purchase group of other investment bankers to participate in the underwriting in order to spread the risk, and organizing a selling group of security dealers to distribute the securities to the public. The spread between the public offering price and the price paid to the issuer by the underwriting group is intended to cover (1) the syndicate manager's fee for performing the above functions, (2) expenses incurred incidental to the underwriting, (3) the underwriting risks assumed by the underwriters, and (4) any price concession given to dealers in the selling group.

All of the accounting for an underwriting is handled by the manager of the underwriting group. This involves the maintenance of accounting records showing the amount of good faith deposits, extent of participation by each member of the purchase group in the underwriting, the

amount of securities *given up* by the manager to the selling group and special classes of investors such as institutions, the amount of securities to be *taken down* by the purchase group members, expenses incurred in the underwriting, and so forth. Upon the conclusion of the underwriting, the manager then settles up with each member of the underwriting group.

TYPES OF CONTRACTS

After securities are distributed to the public, brokers and dealers are concerned with performing the second important function of facilitating the transfer of ownership of securities. There are five basic types of exchange contracts which may be entered into with customers, and the principal basis for distinction is the settlement date. These contracts are generally described as follows:

1. *Cash*—due on the day of contract. Settled directly between the buyer and seller, without passing through the clearing house.

2. *Regular way*—due on the third full business day following the day of contract, except United States Government bonds which are due on the first full business day following the day of contract.

3. *Regular way, delayed delivery*—due on the seventh calendar day following the day of contract. Seller may deliver without advance notice except that such delivery shall not be made before the third full business day following the day of the contract. This type of contract applies only to bonds, but does not include United States Government bonds and certain convertible bonds.

4. *Seller's option*—due within the time specified in the contract, but not to exceed sixty days after the date of the contract. Seller may deliver prior to the specified date if one day's written notice is given, except that such notice shall not be given before the settlement date on a regular way contract.

5. *When issued*—due when, as, and if issued (as determined by the exchange for listed securities, and by mutual agreement between issuer and underwriter for unlisted securities).

Inasmuch as most dealers maintain their accounts on a settlement-date basis, there are a number of unrecorded contracts at all times.

All of the foregoing types of contracts are accounted for in substantially the same manner, and any of them may be settled through cash accounts or margin accounts.

CUSTOMERS' ACCOUNTS

A margin account is distinguished from a cash account by the fact that a margin account involves an extension of credit by the dealer to the

customer for a portion of the contract price, whereas a cash account is settled promptly by payment or delivery. Margin customers are charged a reasonable rate of interest by the dealer for credit extended.

Upon opening a margin account, the customer is required to sign a hypothecation agreement. This agreement permits the dealer to pledge the securities held on margin in the customer's account with some bank or other loaning institution as collateral for a loan therefrom. Without such an agreement, the dealer would be limited in the amount of margin accounts he could carry by the amount of his own liquid capital.

In accordance with the Securities and Exchange Act of 1934, minimum initial margin requirements are set by the Board of Governors of the Federal Reserve System. Until lately, the minimum margin which must be deposited with the dealer in connection with the purchase of a security other than an exempt security was 75 per cent of the current market value. Under certain circumstances the customer may, in lieu of a cash deposit, choose to deposit securities with the dealer to bring his account in line with the minimum margin requirements. Under these circumstances, the security was said to have a maximum loan value of 25 per cent of its current market value. A margin of 75 per cent of the current market value of securities sold short was also required. These minimum initial requirements are subject to change by the Board of Governors.

Under Regulation T of the Board of Governors of the Federal Reserve System, only registered securities (that is, securities registered with the Securities and Exchange Commission) and exempted securities (that is, securities specifically exempt from registration under the Securities Exchange Act of 1934) have any loan value in connection with an initial transaction or the withdrawal of securities or money; therefore, securities other than registered and exempt securities must be paid for in full.

Regulation T also provides that any credit initially extended without violation may be maintained regardless of (1) reductions in the customer's equity resulting from changes in market prices, (2) the fact that any security may cease to be registered or exempted, and (3) any change in the maximum loan value or margin requirements.

The New York Stock Exchange also regulates margin accounts carried by member firms. Its rules, generally, require lower margins than those needed under Regulation T. Exchange rules on minimum initial margins, which govern new securities transactions and withdrawals of cash and securities, require (1) a minimum equity of at least \$1,000, (2) 100 per cent margin on securities valued at less than \$10 per share of stock or 10 per cent of principal amount of bonds, and (3) margin on other securities of \$10 per share of stock or 10 per cent of principal amount of bonds.

New York Stock Exchange rules also provide for minimum mainte-

nance margin on customers' accounts of 25 per cent of the market value of all securities long in the account plus (1) the greater of \$2.50 per share or 100 per cent of the market value, in cash, of each stock short in the account selling at less than \$5.00 per share, (2) the greater of \$5.00 per share or 30 per cent of the market value, in cash, of each stock short in the account selling at \$5.00 per share or above, and (3) the greater of 5 per cent of the principal amount or 30 per cent of the market value, in cash, of each bond short in the account. On obligations issued or unconditionally guaranteed by the United States government, the minimum maintenance margin is 5 per cent of the principal amount. *When-issued* securities must, in general, be margined on the same basis as though the securities had been issued.

The National Association of Securities Dealers, Inc., does not have any rules on minimum margin requirements. Generally speaking, the states do not regulate margin accounts.

The importance of proper market values in determining margin requirements cannot be overemphasized. Determination of market value is relatively simple for securities actively traded each day, but this is not the case for the many inactive issues. Experienced judgment is required to determine the current market value of a security in which trading is spasmodic and in relatively few shares. Additional margins should be required where the securities are subject to unusually violent fluctuations.

After obtaining the initial margin, the responsibility for the maintenance of the proper margin is primarily that of the accounting department. Records are kept by the margin clerk for each margin customer, which show currently the money balance and security position of the customer. These records are constantly reviewed for possibilities of margin deficiencies, particularly when there is an important downward movement of the market. When the customer's margin falls below the maintenance requirements (usually, the dealer will establish house margin requirements in excess of Exchange or Securities and Exchange Commission requirements), calls are made to the customer for more margin. If the additional collateral is not received promptly, the securities in such accounts may be sold, in accordance with Exchange rules. Under Exchange rules, customers are not permitted to make a practice of effecting transactions requiring margin and then either deferring the margin beyond the time when such transactions would ordinarily be settled or cleared, or meeting such demand for margin by the liquidation of the same or other commitments in his accounts.

The margin clerk is also responsible for determining that cash accounts are settled within the prescribed time limits. This check is

usually performed by the cashier in the case of dealers who do not carry margin accounts.

HYPOTHECATION OF CUSTOMERS' SECURITIES

The rules and regulations of the stock exchanges, the Securities and Exchange Commission, and the National Association of Securities Dealers, Inc., forbid the hypothecation of any securities carried for the account of any customer under circumstances:

1. that will permit the commingling of securities carried for the account of any such customer with securities carried for the account of any other customer, without first obtaining the written consent of each such customer to such hypothecation;
2. that will permit such securities to be commingled with securities carried for the account of any person other than a bona fide customer under a lien for a loan made to the dealer; or
3. that will permit securities carried for the account of customers to be hypothecated or subjected to any lien or claim for a sum which exceeds the aggregate indebtedness of all customers in respect of securities carried for their accounts.

In order to prevent hypothecation of customers' securities beyond a reasonable limit, the New York Stock Exchange requires that all of the customers' collateral having a market value in excess of 140 per cent of the debit balance of the account must be segregated from securities which are available to the dealer for hypothecation.

For example of the application of this rule, a customer might buy 100 shares of ABC common stock at 50 by opening a margin account with a dealer and depositing therein (pursuant to Regulation T) initial margin of \$3,750, or 75 per cent of the purchase price. The debit balance of the account would then be \$1,250, secured by collateral valued at \$5,000. Under the New York Stock Exchange rule cited above, collateral (\$5,000) in excess of 140 per cent of the debit balance of the account (140 per cent of \$1,250, or \$1,750) must be placed in segregation. This means that 65 shares, valued at \$3,250, should be segregated.

SAFEKEEPING OR SEGREGATED SECURITIES

Basically, safekeeping or segregated securities are customers' securities fully paid for or those in excess of margin requirements. Such securities are required to be physically segregated and set apart, usually in a separate box, from customers' securities not paid for and from securities owned by the dealer.

Except where the customer has a margin account, the dealer carrying segregated securities may attempt to obtain the customer's consent to make delivery to him in order to eliminate the handling, expense, and risk of holding the securities. In many cases, however, it is impossible to deliver the securities because the customer is out of town or for some other reason.

Segregation of customer's excess margins and paid-for securities is important as a safeguard against misuse of such securities. Without segregation, such securities would be commingled with firm-owned and other customer-owned securities, and might be used to collateralize bank loans, to deliver on firm trades, or for other improper purposes.

The New York Stock Exchange rules require that segregated securities must be marked in a manner which will clearly identify the interest of each individual customer. This may be accomplished by affixing to each certificate a small piece of linen or a paper tab on which is written the name of the specific owner. However, the Exchange has permitted so-called bulk segregation whereby the securities are segregated in bulk by issue without identification of the ownership of each certificate, but in lieu thereof a card record is maintained for each issue to show the names of the customers owning the segregated securities.

The rules of the New York Stock Exchange require that member firms using the bulk segregation method keep in a separate box all securities which are held solely in safekeeping for account of customers and have no value in collateralizing a customer's account. However, dealers who are not members of an exchange usually keep all segregated securities in one box.

PROCEDURES IN EFFECTING A TRANSACTION

A simplified summary of a *regular way* transaction to be settled on a cash basis should be helpful in understanding the accounting therefor. Let us say, for example, that a customer informs the salesman who handles his account that he wishes to buy, for cash, 100 shares of ABC common. The order is then given to the floor trader if the dealer is an actively trading member of the New York Stock Exchange (on which it is assumed ABC common stock is listed) or to the firm's correspondent if the dealer is not an actively trading member of the exchange. (If the security happens to be one which is only traded over the counter, it is necessary for the firm trader to find some dealer who wishes to sell the security or who has a customer desiring to sell the security.) After the firm's correspondent has negotiated the transaction, he so advises the dealer who in turn advises the customer.

Under ordinary circumstances, certificates for 100 shares of ABC com-

mon (in *street* name) are delivered by the selling broker to the correspondent in exchange for a check in the amount of the purchase price, on the third full business day (Saturdays, Sundays, and holidays do not classify as full business days) after the day the transaction was negotiated. The correspondent in turn delivers the certificates, usually the same day, to the dealer with a concurrent money settlement therefor.

If the transaction is over the counter for an unlisted security, the delivery would be made directly to the dealer by the selling dealer in exchange for a check for the purchase price.

Since the transaction was on a cash-account basis, payment should be made by the settlement date (third full business day after the transaction date in the case of a regular way transaction). Regulation T prescribes that payment must be made on or before the close of business on the seventh calendar day from the date of the transaction. If payment has not been received by this time, a cancellation or sale must be effected, except in those cases where an extension for delayed payment has been granted through the filing of an application with the Stock Exchange of the National Association of Securities Dealers.

In almost all cases the customer will wish to have the certificates transferred into his own name. The dealer cannot have the transfer made until after payment has been received, because it is necessary that the certificates remain in readily negotiable form until that time. Assuming in our illustration that payment is received from the customer within the prescribed time, and assuming further that he has given instructions that the certificates be transferred into his own name, the dealer sends the certificates to the transfer office of ABC common stock with instructions for transfer into the name of the customer. The transfer office cancels the old certificates, issues new certificates in the name of the customer, and sends the new certificates to the dealer who in turn transmits them to the customer. In some cases, the transfer office is instructed to forward the new certificates directly to the customer at a specified address.

Many corporations do not maintain their own transfer office but employ transfer agents, usually banks or trust companies, to make transfers for them.

The same general procedure outlined above also applies when the transaction is for the sale of a security, except that when delivery is made by the dealer to the broker in street name, the dealer has completed the transaction. If the sale is made upon the customer's order without the dealer having physical possession of the certificates, the customer must make delivery of such certificates within the time prescribed by Regulation T, at which time he may demand the proceeds of the sale.

The above-described procedures in completing a cash-account transaction do not apply entirely to margin accounts. For example, in the case of margin accounts the securities are not transferred into the name of the customer nor are they delivered to the customer until the account is settled.

It should also be understood that the foregoing outlines only the usual practices and procedures, to which there are numerous exceptions. However, substantially the same procedures are followed whether the security is listed on a national securities exchange or is bought or sold by the dealer as principal or agent.

Most of the important stock exchanges have set up what are known as *clearing corporations* for the purpose of simplifying the clearing of transactions between member firms. All transactions on a given day are reported to the clearing corporation which matches the sales by each dealer in a given security against purchases by that dealer in such security and instructs the dealer to make certain net deliveries of securities to, or to accept net receipts of securities from, certain other dealers on the delivery or settlement date. This procedure avoids much duplication of effort on the part of each dealer in that only net amounts of securities arising from all transactions for one day are involved in effecting settlements. The clearing house establishes a daily settlement price for each security to eliminate money settlements between dealers. The difference between this settlement price and the actual transaction price is settled daily for all trades by the clearing house with the individual dealers after settlement has been made at the settlement price.

REGULATION OF ACCOUNTING AND RELATED PROCEDURES AND PRACTICES

Regulation of the accounting and related phases of the securities business comes from five sources:

1. Securities and Exchange Commission.
2. Stock exchanges.
3. National Association of Securities Dealers, Inc.
4. Board of Governors of the Federal Reserve System.
5. State securities departments.

Under the Securities and Exchange Act of 1934, brokers and other dealers are required to register with the Securities and Exchange Commission; and the Commission is empowered, among other things, to formulate rules and regulations pertaining to the accounting, financial reporting, and related phases of the securities business.

The stock exchanges have rules on this same subject which do not apply, of course, to dealers who are not members. The rules of the New York Stock Exchange are followed to a large extent by the other exchanges and are similar, though somewhat more extensive and detailed, to the rules of the Securities and Exchange Commission.

The National Association of Securities Dealers, Inc., organized under the Maloney Act, an amendment to the Securities and Exchange Act, provides regulation for over-the-counter business similar to that provided by the national stock exchanges for members of those exchanges.

Regulation T, covering the extension and maintenance of credit by brokers, dealers, and members of national securities exchanges, is issued by the Board of Governors of the Federal Reserve System pursuant to authority granted by Securities and Exchange Act of 1934.

Under the so-called blue-sky laws of each state, the securities departments thereof regulate dealers operating within the boundaries of such state. The rules differ as between the various states, but effort is being made by the securities commissioners to standardize requirements. Generally these rules are not as extensive or as detailed as those of the other regulatory bodies.

Regulation of the accounting and related phases of the securities business is directed toward:

1. Completion of transactions.
2. Payment of cash accounts.
3. Margins on margin accounts.
4. Segregation of paid-for securities.
5. Types of records.
6. Capital requirements.
7. Financial reports.

Discussion of the first five types of regulations mentioned above has previously been included with the sections relating to the corresponding phases of the business and will not be repeated under this heading.

CAPITAL REQUIREMENTS

The Securities and Exchange Commission does not require a minimum amount of capital but, with certain exceptions, it does limit to twenty times the amount of his net capital the amount of indebtedness of a dealer who (1) extends credit to customers, (2) carries money balances or securities for the account of customers, or (3) owes money or securities to customers. In computing the net capital of a firm, undistributed profits, both realized and unrealized, may be added, as may equities in

accounts of partners who have agreed in writing that such equities may be included as partnership property; but there must be deducted the realized and unrealized losses, items which cannot be readily converted into cash (such as furniture and fixtures and prepaid expenses), unsecured advances to partners, officers, employees, and so forth, unsecured receivables from customers, and 10 per cent of long securities, short securities, and contractual commitments in the capital, proprietary, and other accounts of the dealer.

The New York Stock Exchange requires each member firm that carries accounts for customers to maintain a minimum capital of \$50,000; a minimum of \$25,000 is required of all other member firms. In addition, there is a limitation on indebtedness similar in general to that of the Securities and Exchange Commission, except that the limitation is 15 times net capital rather than 20 times, and that 30 per cent of the market value of long securities in firms' and general partners' accounts and in customers' accounts in deficit must be deducted in computing net capital.

The National Association of Securities Dealers, Inc., does not impose any limitations of its own on the amount of capital of a member, but it does limit membership to dealers "authorized to transact and whose regular course of business consists in actually transacting any branch of the investment banking or securities business in the United States under the laws of any state and/or the laws of the United States."

There does not appear to be any uniformity between the various states as to capital requirements. Some states require a minimum amount of capital (for example, \$5,000 in Illinois). Other states, including New York, do not have any limitations.

FINANCIAL REPORTS

The financial reporting to the regulatory bodies is an important part of the regulatory procedures. Financial statements must be filed by all dealers with the Securities and Exchange Commission, by member firms with the stock exchanges, and, generally speaking, by all dealers with the various states in which they do business. No financial statements are required to be filed with the National Association of Securities Dealers, Inc.

With certain exceptions, the report to the Securities and Exchange Commission and one of the reports of each member firm to the New York Stock Exchange must be audited by independent public accountants. Most states require that the reports submitted to them be audited. For New York Stock Exchange purposes, the audits must be on a surprise basis, that is, arrangements are made by the dealer with the independent

TABLE 22
Form X-17A-5—Part I
XYZ CORPORATION
June 30, 1947

	Ledger Debit Balances	Ledger Credit Balances	Long Security Valuations	Short Security Valuations
1. Bank balances and other deposits—				
Cash on hand	\$ 1,000	\$	\$	\$
Cash in banks subject to immediate withdrawal	356,000			
Cash in banks subject to withdrawal restrictions	10,000			
Good faith deposits	5,000			
2. Money borrowed, and accounts carried for respondent by other banking or brokerage houses, secured by or containing customers' collateral—				
(a) Money borrowed—				
(1) From banks		100,000		120,000
(2) From others				
(b) Accounts carried by other banking or brokerage houses (omnibus accounts)—				
(1) Securities accounts—				
A. Accounts with net debit balances				
B. Accounts with net credit balances		500,000		650,000
(2) Commodities accounts—				
A. Regulated commodities accounts				
B. Nonregulated commodities accounts				
3. Money borrowed, and accounts carried for respondent by other banking and brokerage houses, unsecured, or secured entirely by collateral owned by respondent and its partners as officers and directors—				
(a) Money borrowed—				
(1) From banks, trust companies and other financial institutions		50,000		65,000
(2) From officers and directors				

(3) From others				
(b) Accounts carried by other banking and brokerage houses (omnibus accounts)—				
(1) Securities accounts—				
A. Accounts with net debit balances				
B. Accounts with net credit balances				
(2) Commodities accounts—				
A. Regulated commodities accounts—				
(1) Accounts liquidating to an equity				
(2) Accounts liquidating to a deficit				
B. Nonregulated commodities accounts—				
(1) Accounts liquidating to an equity				
(2) Accounts liquidating to a deficit				
4. Other accounts and open items with brokers and dealers—	125,000			126,000
(a) Securities borrowed				
(b) Securities failed to deliver				
(c) Securities loaned				
(d) Securities failed to receive—				
(1) On account of customers' transactions				
(2) On account of officers' and directors' transactions				
(3) On account of respondent's transactions				
5. Valuations of securities and spot (cash) commodities in box, transfer and transit—				
(a) Negotiable securities in box and in transfer				
(b) Negotiable securities in transit between offices of respondent				
(c) Spot (cash) commodities represented by warehouse receipts or bills of lading in box or in transit between offices of respondent				
6. Customers' security accounts—				
(a) Cash accounts	300,000			298,000
(b) Secured accounts	450,000			700,000
(c) Partly secured accounts	10,000			8,000
(d) Unsecured accounts				
		\$	\$145,000	\$
				\$148,000
				312,000

TABLE 22 (continued)
XYZ CORPORATION

	Ledger Debit Balances	Ledger Credit Balances	Long Security Valuations	Short Security Valuations
(e) Accounts with credit balances having open contractual commitments				
(f) Accounts with free credit balances		250,000		
7. Customers' commodity accounts—				
(a) Accounts with open future commitments liquidating to an equity—				
(1) Regulated commodities				
(2) Nonregulated commodities				
(b) Accounts with open future commitments liquidating to a deficit—				
(1) Regulated commodities				
(2) Nonregulated commodities				
(c) Accounts with spot (cash) commodities positions—				
(1) Hedged—				
A. Secured				
B. Partly secured				
(2) Not hedged—				
A. Secured				
B. Partly secured				
(d) Unsecured debit balances				
(e) Accounts with free credit balances—				
(1) Regulated				
(2) Nonregulated				
8. Accounts of officers and directors—				
(a) Officers				
(b) Directors				
9. General partners' individual accounts				
10. Trading and investment accounts of respondent—				
Exempt securities	75,000			77,000

	85,000	86,000
Nonexempt securities		
11. Capital accounts—		
(a) Sole proprietorship		
(b) Partnership capital		
(c) Corporation capital—		
(1) Capital stock, \$100 par value —		
A. Authorized, 10,000 shares		
B. Outstanding, 1,000 shares	100,000	
(2) Capital surplus	60,000	
(3) Earned surplus, including balances remaining in income and expense accounts	160,000	
12. Other accounts—		
Prepaid insurance	\$ 2,000	\$
Furniture and fixtures	5,000	
Reserve for depreciation of furniture and fixtures		
Accounts payable		2,000
Accrued taxes, other than income taxes		12,000
Accrued Federal income taxes		10,000
		45,000
	<u>\$1,424,000</u>	<u>\$1,424,000</u>
	<u>\$1,424,000</u>	<u>\$1,295,000</u>
13. Contractual commitments that are not recorded in a ledger account for money—		
(a) (1) For account of respondent—		
When—issued trades—		
	<i>Purchases</i>	<i>Sales</i>
	<i>Principal Amount</i>	<i>Principal Amount</i>
	<i>Cost</i>	<i>Proceeds</i>
ABC Railroad, 4-1/4%, 1983	\$100,000	\$100,000
	\$ 90,000	\$ 91,000
	<u>\$500,000</u>	<u>\$ 20,000</u>
14. Contingent items—		
Underwriting commitment—		
EFG Company, common stock, 10,000 shares		
Lawsuit by former officer for additional compensation		

public accountants at the beginning of each calendar year, the auditors being given the option to make the audit at any time they select during the year, without any previous notice to the dealer. The minimum scope of these audits is outlined by the various regulatory bodies; it is sufficient for this purpose to state that the audits must be made in considerable detail.

Originally the various regulatory bodies required that a dealer in securities file financial statements in a particular form; these forms were dissimilar in many respects. It became quite a burden on the accounting staffs, on the auditors and others to prepare the various statements which would comply with the requirements of each of these forms. In recent years, however, substantial progress has been made in standardizing the forms, so that practically identical information is called for by the Securities and Exchange Commission and the national stock exchanges. Thus, reports prepared under either requirements are acceptable to most of the regulatory bodies. The form used will usually depend upon whether the dealer is a member of a national exchange. If he is a member, the stock exchange questionnaire will be prepared as of a surprise audit date and a copy thereof submitted to the Securities and Exchange Commission and the state regulatory bodies. If the dealer is not a member of a national exchange, Form X-17A-5 as developed by the Securities and Exchange Commission will be prepared annually, usually as of the close of the fiscal year of the respondent, and a copy submitted to state regulatory bodies. Several of the state securities' departments still do not accept these forms, however.

Form X-17A-5, which is frequently referred to as a questionnaire, gets its name from the fact that it was developed pursuant to Rule X-17A-5 of the Securities and Exchange Commission, entitled *Reports to Be Made by Certain Exchange Members, Brokers and Dealers*. The principal part of the report (Part I) is in the form of answers to 14 questions which set forth the information required by the Commission. Part II consists of a list of dealer-owned securities and certain other details considered to be essential to a reliable appraisal of the dealer's financial condition.

Form X-17A-5 requires that, in addition to the money balances, the current market values must be shown for all securities in control of the dealer, except safekeeping or segregated securities.

The general nature of Form X-17A-5 is shown in Table 22, an illustration of Part I. (It is assumed that the dealer is a corporation and is not a member of any stock exchange.) All questions are stated as in the questionnaire, though in actual practice it is not necessary to state questions which do not apply to the respondent.

The New York Stock Exchange also requires its members to make

available to its customers a *Statement of Financial Condition*. This statement is in the form of an ordinary commercial balance sheet except that it is presented on a liquidating basis, that is, all securities owned are stated at current market value instead of the customary cost. An example of such a statement is shown in Table 23. In this illustration it is assumed that the dealer is a partnership.

It should be noted that in the above statement segregated securities held for partners are included in the assets and partnership capital. In a statement of financial condition, such securities are properly included as partnership capital if the respective partners have so agreed.

The financial statements submitted to the Securities and Exchange Commission and the national stock exchanges are reviewed in the offices of those bodies, and occasionally field auditors make a more extensive and detailed review, particularly if there are parts of the statement or certain accounting procedures with which the commission or the exchange is not satisfied. Any matters which require adjustment are brought to the attention of the dealer, and opportunity is given him to make the proper correction.

CONCLUSION

The high standards of ethics of investment bankers have dictated many of the accounting and related procedures described in this chapter. An efficient accounting department is a prerequisite to attaining the objectives of these procedures and contributes to the present position of investment bankers in our economic system.

TABLE 23
Statement of Financial Condition
BLANK & Co.
June 30, 1947

ASSETS		
CURRENT ASSETS:		
Cash, including \$20,000 of customers' segregated funds		\$1,000,000
Deposits with clearing corporations		25,000
Receivables from other brokers and dealers		400,000
Receivable from customers—		
Cash accounts	\$150,000	
Margin accounts	200,000	350,000
	<hr/>	
Securities held for firm and partners' accounts—		
Firm	\$ 50,000	
Partners	75,000	125,000
	<hr/>	
Miscellaneous		15,000
		<hr/>
Total current assets		\$1,915,000

TABLE 23 (continued)

BLANK & Co.

OTHER ASSETS:

Exchange memberships	80,000
Prepaid expense	15,000
	<hr/>
	\$2,010,000

LIABILITIES

CURRENT LIABILITIES:

Bank loans (firm, partners' and customers' securities separately pledged as collateral)	\$ 100,000
Payable to other brokers and dealers	350,000
Payable to customers—	
Free credit balances	\$150,000
Cash accounts and secured short accounts	50,000
	<hr/>
Sundry payables	100,000
	<hr/>
Total current liabilities	\$ 750,000

PARTNERSHIP CAPITAL

1,260,000

\$2,010,000

GLOSSARY OF IMPORTANT TERMS

Arbitrage: (1) A purchase or sale of a security in one market together with an offsetting sale or purchase of the same security in a different market at as nearly the same time as practicable, for the purpose of taking advantage of a difference in prices in the two markets, or (2) a purchase of a security which is . . . exchangeable or convertible within a reasonable time into a second security together with an offsetting sale at or about the same time of such second security, for the purpose of taking advantage of a disparity in the prices of the two securities (as defined in Regulation T).

Blotter: A general term used to denote books of original entry for recording such transactions as receipt and delivery of securities and cash.

Correspondent: An actively trading member of a national securities exchange who effects transactions on that exchange for another dealer and the customers of that dealer.

Fail to deliver: A long security position arising in the accounts of the selling dealer when he fails to deliver securities to another dealer as contracted. On the money ledger it results in a debit balance due from the purchasing dealer upon delivery of the securities.

Fail to receive: A short security position arising in the accounts of the purchasing dealer when he fails to receive securities from another dealer as contracted for. On the money ledger it results in a credit balance due to the selling dealer upon receipt of the securities.

Hypothecation agreement—between a margin account customer and a dealer: A written agreement permitting the dealer to pledge securities carried for the

account of the customer either alone or with other securities, either for the amount due thereon or for a greater amount, or to lend such securities.

Margin: The customer's equity, or the amount by which the value of the collateral exceeds the debit balance of a customer's account. The term is also applied generally to customers' accounts in which the dealer has extended credit, that is, customers' margin accounts.

Omnibus account: A margin account carried by one dealer, in the capacity of correspondent, for another dealer, who in turn is carrying the securities and the short sales for the account of his customers.

Option contracts:

Call—a contract by which the maker agrees for a price to sell, at the option of the purchaser of the call, a certain number of shares at a predetermined price (generally above current market) within a specified number of days.

Put—a contract by which the maker agrees for a price to buy, at the option of the purchaser of the put, a certain number of shares at a predetermined price (generally below current market) within a specified number of days.

Straddle—a contract by which the maker agrees for a price to sell and/or to buy, at the option of the purchaser of the straddle, a certain number of shares at a predetermined price (generally current market) within a specified number of days.

Spread—a contract by which the maker agrees for a price to sell at a specified price (above current market), or to buy at a different specified price (below current market), a certain number of shares within a specified number of days at the option of the purchaser of the spread.

Position (also "long" position and "short" position): A term referring, in general, to the designation of ownership and location of securities resulting from each transaction. A separate accounting for the changes in security positions is maintained for each issue, with ownership being indicated as a *long* position, offset by a *short* position indicating short sales and the physical location of the securities.

Long security positions include:

1. Customers' securities.
2. Firm's or partners' securities.
3. Fails to deliver.
4. Securities borrowed.

Short security positions include:

1. Customers' sales; securities not delivered.
2. Securities pledged as collateral to bank loans.
3. Fails to receive.
4. Securities loaned.
5. Securities out for transfer.
6. Securities in box.
7. Securities of customers segregated.

Safekeeping security or segregated security: These terms are synonymous and refer to customers' securities held by the dealer which have been physically segregated from other customers' securities and from its own securities because they have been fully paid for by the customer, or are in excess of margin requirements.

Security borrowed: A security borrowed arises when the dealer, or a customer, sells a security short, that is, he sells it without owning it. If the dealer does not have such shares available with which to make delivery, he must borrow the

shares from some other dealer who does have them available. At that time, the dealer is required to make a cash deposit with the loaning dealer for the approximate market value of the securities borrowed. The term is used to refer both to the security itself and the deposit carried as an asset by the borrowing dealer.

Security loaned: As the name implies, a *security loaned* is the opposite of a *security borrowed*. It refers to a situation where the dealer has loaned a security to another dealer. The term is used to refer to both the security itself and the liability for the cash deposit.

Street name: A security registered in the name of a member firm, properly endorsed.

REVIEW QUESTIONS

1. What regulatory bodies establish rules which affect accounting procedures and practices of investment banking firms?
2. What are the principal duties of the cashier?
3. What are the principal duties of the accounting department?
4. What is meant by internal control? How is it made effective?
5. What accounting records should dealers maintain?
6. Are accounts usually kept on a contract date or on a settlement date basis?
7. Discuss how a typical transaction is recorded in each of the following records:
 - (a) Buy and sell orders.
 - (b) Confirmations.
 - (c) Security blotter.
 - (d) Cashbook.
 - (e) Purchase and sales journal.
 - (f) Customers' ledger accounts.
 - (g) Security position ledger.
8. Who pays the federal and state transfer taxes—the buyer or the seller?
9. What types of transfers of legal title are not subject to federal transfer tax?
10. How are federal transfer taxes paid?
11. What is the rate for the federal transfer tax for bonds and for stocks?
12. Who is responsible for the proper payment of transfer taxes?
13. Describe the accounting procedures usually followed by a securities dealer to record the following types of transactions involving interest and dividends:
 - (a) Coupons mature on bonds held by a dealer for a customer.
 - (b) Dividends are received on stock owned by a customer but registered in street name.
 - (c) Dividends are received by the dealer but the beneficial owner cannot be determined.
14. What is a "due bill"?
15. What information is usually included in a written claim for a dividend?
16. What is the purpose of the "position book"?
17. What reports are regularly prepared by the accounting department?
18. What accounting records are maintained by a syndicate manager?
19. What are the five basic types of contracts involving settlement days which may be entered into with a customer?
20. What records are kept by the margin clerk?

21. What are the limitations imposed by the SEC and by the New York Stock Exchange on the hypothecation of securities carried for the account of a customer?

22. Why are dealers required to segregate customers' excess margin and paid-for securities from securities owned by the dealer and customers' securities not paid for?

23. How may segregated securities be marked to comply with NYSE rules?

24. Describe the operation of a "clearing corporation" of a stock exchange. What are the advantages of a "clearing corporation" for the accounting department of a member firm?

25. What limitations are imposed by the SEC on the amount of indebtedness incurred by a securities dealer? How are the debt limitations computed?

26. What are the minimum capital requirements of members of the NYSE?

27. With what regulatory bodies must security dealers file financial statements?

28. In general, what information is required by Form X-17A-5 of the SEC?

29. What are the requirements of regulatory bodies for audits by independent public accountants?

30. How does the "Statement of Financial Condition" required by the NYSE differ from an ordinary balance sheet?

31. Define the following terms:

- (a) Blotter.
- (b) Correspondent.
- (c) Fail to deliver.
- (d) Fail to receive.
- (e) Hypothecation agreement.
- (f) Omnibus account.
- (g) Option contracts:
 - (1) Call.
 - (2) Put.
 - (3) Straddle.
 - (4) Spread.
- (h) Long position.
- (i) Short position.
- (j) Safekeeping or segregated securities.
- (k) Securities borrowed.
- (l) Securities loaned.
- (m) Street name.

PART IV

**Personal and Institutional Investment
Problems**

INVESTMENT MANAGEMENT

*by Dr. Paul L. Morrison, Professor of Finance
and Chairman of the Department of Finance,
Northwestern University*

IN PRECEDING CHAPTERS, analysis of industries and the selection of items have been stressed. Here, attention is directed to the financial estate of the family unit or of the investing institution as a whole. From such a point of view, the item is merely a pawn in the larger game of financial planning.

Economic activity is undertaken for economic returns or rewards, the principal forms being (1) current income, (2) capital or realized gains and losses, (3) market value gains and losses, (4) purchasing power gains and losses, and (5) monetary or foreign exchange gains and losses. The investor may use any or all of these concepts in measuring his economic success or failure, but the emphasis will vary among investors at any given time and will vary, in the case of a given investor, from time to time.

Income which flows currently and regularly in the form of salary, interest, and dividends is recognized by all as a reward for services rendered or for the use of capital. The term *current income* is appropriate for this type of reward.

CAPITAL GAINS AND LOSSES

On the other hand, when the value of one's home rises substantially over a period of time, some will recognize that there has been a flow of income during that period while others will deny the existence of any reward until the house actually is sold. When the house is sold, the gain or loss is measurable in terms of money, and the tax collector takes his share of any gain; but the seller, who takes the net amount remaining after the payment of taxes on the gain and purchases another, and, of necessity, smaller house in the same market, wonders where the gain is. On the other hand, the man who sells for a high price at the time of an extreme housing shortage and purchases a better house for less in the

ensuing real estate depression is certain that he has had some kind of an income, whatever it may be called.

In contrast, the conservative British investment trust credits capital gains to reserves for losses and reports as income only interest and dividends received. Conversely, some American bank examiners overlooked realized losses during the collapse of banks in 1932 and 1933 where a bank sold one bond and purchased another and recorded as the cost of the bond bought the amount at which the first bond had been carried on the bank's books. To illustrate, bond A cost \$1,000. It was sold for \$630 and bond B was purchased for the same amount. On the books, the transaction was treated as an exchange, therefore the cost of bond B was regarded as \$1,000 and the realized loss of \$370 was ignored. Since the solvency of the bank was at issue, the end was used to justify the means.

In trust funds, interest and dividends accrue to the life tenant while the capital gains and losses accrue to the corpus of the trust, a clear-cut distinction between two types of income.

MARKET VALUE GAINS AND LOSSES

Calculation of the market value of assets periodically shows the owner not only the market appraisal of the particular items and of the fund, but also provides evidence for the purpose of making purchases and sales and loans. Such a study may reveal opportunities for taking advantage of market action.

Some institutions, such as fire and casualty insurance companies, frequently show securities owned at market value on their balance sheets because they may have to liquidate those securities to pay large potential liabilities.

Investment trusts tend to emphasize increases in market values of their portfolios because they claim skill in the selection of items and in shifting the character of their portfolios at opportune times. They use market values in computation of liquidating value, but they do not call such changes in value by the technical term *income* until they have been realized.

Regardless of terminology, all investment managers use market valuation as a tool of measurement. The more violent the market fluctuations, the more important the tool becomes.

PURCHASING POWER GAINS AND LOSSES

When commodity prices change rapidly and extensively, as in early postwar periods, the changing purchasing power of income and principal focus the attention of investment management upon the measurement of purchasing power and upon ways and means of protecting against adverse price action of commodities and services. Changes in price levels,

in effect, are changes in the internal value of the money of the country and are popularly called *inflation* and *deflation*.

Charles O. Hardy¹ helped clarify the problem of inflation by classifying it into four types:

First, *sporadic* inflation, "which consists of cases in which the average of a group of prices rises because of sporadic increases in individual prices due to abnormal shortages of specific goods."

Second, *monetary* inflation, "an over-all adjustment of prices to an increased supply of money, which is not accompanied by a corresponding increase in the demand for cash balances not offset in its price effects by corresponding increase in the flow of goods and services."

Third, *speculative* inflation, "in which prices rise more than in proportion to the increase in the quantity of *money*."

Fourth, public bankruptcy or *astronomical* inflation, "where a monetary inflation based on a budget deficit financed by the issuance of new money has reached uncontrollable proportions."

The last type has a particularly devastating effect on foreign exchange rates. Inflation and deflation vitally affect the purchasing power of one's income and one's assets.

Fluctuation in the amount of economic activity in the nation vitally affects the amount and variations in income of the inhabitants. The more or less rhythmic waves termed business cycles, and the longer-term secular trends running through a series of business cycles, also will affect much of the discussion which follows. They not only present risks to be minimized, but also opportunities to be capitalized.

MONETARY GAINS AND LOSSES

Closely identified with changes in the internal value of money are changes in the external value as measured by exchange rates with other currencies. When the investor has the opportunity to take advantage of shifts in exchange rates he becomes particularly conscious of the factors at work in the international field. This is especially true when he is afraid of the value of his own money.

MEASUREMENT OF RISK AND REWARDS

In summary, enough has been said to demonstrate the complexity of measurement of economic rewards. Current income may appear satisfactory but may be less than the decline in the market value of the fund

¹ Charles O. Hardy, "Prospects of Inflation in the Transition Period," in *Postwar Economic Studies* No. 4, May, 1946, Board of Governors of the Federal Reserve System, Washington, pp. 4-7.

during the same period of time; or, a small current income may be offset by a rapidly rising purchasing power of that income and of the principal of the fund; or, a fund all in dollars may be producing no current income, but the appreciation of the dollar in relation to the currency of the country in which the traveler is located may be so substantial that the owner believes he is having a more than satisfactory reward.

The solution to the dilemma is to measure the reward in relation to the objective of the owner: current income, capital gain, market value preservation or appreciation, purchasing power preservation or increase, or foreign exchange value preservation or increase, or some combination of these objectives. No one measurement of the management of investments is satisfactory for all conditions and at all times.

The amount and character of liabilities and other demands on the fund must be considered in measuring results. For example, insurance companies and savings banks, whose liabilities are in dollars, are interested primarily in preservation of dollar value rather than of purchasing power.

Results will vary depending upon the period of time selected, because the various types of reward or income are not regular and uniform. The shorter the period and the more abnormal the period, the less satisfactory are the results. The minimum time normally is a complete cycle of inflation and deflation. Any lesser period would be affected by abnormal forces found in each phase of a cycle. Certainly a month or a year is an arbitrary unit of time for measuring investment results.

PERSONAL SERVICE INCOME

Financial estates are generally built by one or more of the following methods: (1) savings out of income from personal services; (2) business ventures; (3) life insurance; (4) gifts and inheritances.

In 1946, national income of the United States amounted to 178.2 billion dollars. This amount was distributed as follows: compensation of employees, 116.8 billions; income of unincorporated business and professional enterprises (less inventory adjustment), 19.7 billions; corporate profits (less inventory adjustments), 16.5 billions; farm income, 15.2 billions; rental income, 6.9 billions; and net interest, 3.2 billions.² Disposable personal income in 1946 amounted to 158.4 billion dollars. Of this amount 14.8 billion dollars was saved.³

Salaries and wages of 116.8 billion dollars accounted for 65.5 per cent of the national income and constituted the most dynamic factor in our economy. For a substantial part of the population, salaries and wages

² *National Income Supplement to Survey of Current Business*, United States Department of Commerce, July, 1947, Table 1, p. 19.

³ *Ibid.*, Table 3.

are the only source of income, virtually all of such income being spent promptly for current living or used to retire debts previously contracted in anticipation of salary or wage receipts. Such families have no capital or investment problems because the balancing of their current budgets is quite an achievement.

Individuals, therefore, had the problem of finding employment for almost 15 billion dollars of savings in addition to the administration of capital already owned.⁴

During the early stages of a man's economic life, salary or wages provide virtually all of his income. The administration of that income is all-important. If the young man has a high degree of social security through employment by a large corporation which pays a substantial part of his compensation in the form of contributions to pension funds, benefit funds, and profit-sharing funds, the incentive for saving for old age is materially reduced, and to the extent that these plans are sound and adequate and to the extent that the job is secure, the necessity for further saving is eliminated. In return for social security the young man generally foregoes large current income and rapid increases in income. He will be fortunate if he can finance a home and a life insurance program which will be adequate for the protection of his family.

At the other extreme is the young man who is a salesman and whose sole income is received from commissions. Since his income is sporadic and fluctuating, he should keep his fixed obligations at a minimum. He should build, as rapidly as possible, a substantial reserve in the form of cash and demand deposits for emergency purposes. Such funds produce no income, but that is not important for the emergency fund. The small amount of income which may be obtained from alternative employment of the funds is insignificant in relation to the advantage of having a known amount of cash immediately available.

As the fund grows, a savings account is logical. Except under the most extreme conditions a savings account is highly liquid in a definite amount and, in addition, provides a modest income. The salesman will normally proceed more slowly with his insurance program than will the conservative clerical employee previously discussed. Emergency cash reserve should be built rapidly by the salesman, even at the risk of delaying the insurance estate; but obviously the family should be protected, at least partially, at the earliest practicable date against loss of income in case of death of the income producer.

A third type of problem is presented by the young professional man. He probably is in debt for part or all of his professional education. His

⁴ *Loc. cit.*

income will be meager for a while and his living expenses high because of the necessity of appearing successful and of being seen in the right places. His income probably will increase persistently and substantially. The administration of that income will be governed by the same principles that have been discussed before. At a fairly early age he may have funds to invest, however, and his connections may present opportunities or perhaps obligations to participate in syndicates, joint ventures, or promotional schemes. Careful judgment will be required at that point.

The only reward to be obtained from most professions is the current income from services rendered. Occasionally, however, a doctor can sell his practice for a portion of the fees actually received from his former patients during the ensuing year, or an accountant can sell his clientele on a similar basis. The cost of admission to junior membership in a legal, accounting, or financial firm may be paid out of future earnings, and the amount is determined by the actual future gross income of the firm.

In other instances, an actual price is determined in advance and a note given in payment. Still another method of admission to partnership is for the new partner to earn his admission by rendering services for less than a fair compensation. The medical profession frequently uses such a system. Under any condition, the sale value of the profession is merely incidental in relation to the total current income received during the professional life of the individual.

Occasionally a young man is employed by a small company and some of his compensation may be paid in stock in the company, or he is expected, as a part of his employment, to use some of his salary to purchase stock in the company. In either case he should build his emergency cash fund as rapidly as possible and to a substantial amount because both his job and his capital are subject to similar risks. His insurance protection will no doubt be delayed because of the demand for stock purchases. If the company is successful, he will build an estate rapidly, but to do so he probably will have to forego the security of an insurance estate. This illustrates the fact that all through life one takes risks in the hope of obtaining rewards. When the risks are pyramided deliberately, the rewards tend to be distinctly greater or less than would result from a more conservative course.

Analysis of the financial estate of a family group, then, should start with personal service income. If personal service income, business income, and investment income are all required to cover financial expenditures, then all three sources of income must be analyzed carefully and synthesized into a working whole. The different types of risk need to be recognized and appraised.

Another type of problem is presented when personal service, business, and investment income are more than ample to cover current expenses. The investment fund can be administered with freedom and without pressure. This is the ideal situation. Undue risks need not be taken since there is no pressure for current income or capital gain. More funds can be kept in liquid form to take advantage of true bargains in business and investments. Over-all results tend to be best under these conditions.

In analyzing personal service income the employing company needs to be studied carefully from the standpoint, first, of ability to pay, and, second, of willingness to pay, that is, salary and wage policies. The secular trend of the company's earnings is important. Salaries, particularly of key individuals, tend to rise with growth of the company. A declining trend endangers not only the pay scale but also continuation of the job. The more widely a company's earnings fluctuate during a business cycle, the more volatile does the amount of salary tend to be and the less secure does the employment contract tend to become. All jobs in a given concern are not equally secure, and external economic forces tend to exaggerate the internal differences.

To summarize, analysis of personal service income is an integral part of investment analysis. The character and degree of risk in the personal service income is an integral part of investment analysis. The character and degree of risk in the personal service income should be ascertained. For almost all family units, personal service income is the dominant part of the total income. From it, current expenditures are made, and savings, if any, arise. Building an estate by this route is slow and laborious, but it is the only route available to most people. The secular, cyclical, and sporadic character of personal service income needs to be appraised and integrated into the income from the remaining assets, if a sound financial program is to result.

The conservative policy is to counterbalance the characteristics of personal service income with opposite characteristics in the business, investment, and monetary sections of the estate. If the personal service income is volatile and insecure, an emergency cash fund should be built up. If secure but small, reliance should be placed on insurance and pension funds. If secure and substantial, business and investment risks are appropriate. On the other hand, if the desire is to make a fortune even at the risk of utter failure, similar risks may be compounded rather than hedged as above.

BUSINESS VENTURES

When an individual contributes both personal effort and capital, the term "business venture" is appropriate. The term applies not only to

business enterprises as such but also to real estate ventures. The income which accrues from such business ventures results from merging productivity of both the capital and services of the individual. A more or less arbitrary amount of income can be ascribed to each of the factors, but such action does not conceal the fact that all of the income is a joint product.

Net income of proprietors is second only to salaries and wages as a producer of national income. In 1946 agricultural proprietors had income of 15.2 billion dollars and nonagricultural proprietors, 19.7 billion dollars, a total of 34.9 billion dollars, or 19.6 per cent of the national income in that year. This income is a dynamic factor in the economy. It is the source of living expenses for a large number of families, it provides funds to be plowed back into the business units, and it creates savings to be employed elsewhere.

Through the generations, many estates have been built by the efficient combination of capital and labor by skilled merchants and manufacturers. Business ability has the opportunity to display its real talents in owner-managed enterprises. This is particularly true when income from the business can be reinvested in the business and the results pyramided.

A commitment in an individual enterprise or in real estate is not only a compounding of capital and personal services but also is, for all practical purposes, a long-term venture. To withdraw from it necessitates the finding of the isolated individual or group who may care to buy the enterprise, or the business can be liquidated by selling the various assets for what they will bring. Unprofitable businesses sometimes are operated until the assets are dissipated through losses.

The same principle applies to a partnership business venture, with the additional feature that death of a partner dissolves the partnership and a new deal is called for. Farsighted partners frequently use insurance on their lives to provide cash for such an emergency.

Family-controlled corporations tend to have the same general characteristics as the individual enterprise type of business venture, but corporations with multiple ownership and without control resting in any individual or group should be analyzed further.

BUSINESS VENTURE SECURITIES

Capital employed in securities which are not readily marketable is a type of business venture. The common characteristic of all business ventures is inability of the owner to transfer his capital to other uses at his own discretion.

The "value" of the securities is arbitrary and of no immediate significance because they cannot be sold readily. A redeeming feature is that marketability improves in periods of prosperity. Thus, securities which

draw no bid in depression may be liquidated in prosperity. Bankers can underwrite and distribute securities at high prices in periods of prosperity, which securities they will not buy and cannot sell in depression.

Bonds and notes, which will mature in the not too far distant future and which are expected to be paid at maturity, are not business ventures because they will be converted into cash soon. On the other hand, debts which do not have an early maturity and which are not readily marketable are business ventures of the owner.

APPRAISAL OF BUSINESS VENTURES

A careful appraisal of business ventures included in an estate needs to be made in order to ascertain the types and characteristics of the risks and the anticipated rewards in the entire estate.

The direction of the secular trend has an important bearing on the size of the income flow in future years and the probable demands for additional capital. The opinion as to the secular trend may be quite positive or it may be merely a possibility. All of these variable factors are important in preparing the plan for the entire estate.

The cyclical characteristics of a business venture need to be studied. The more extreme the cyclical swings, the more variations there are in the income flow from the enterprise. Likewise, greater managerial skill is required and the possibility of failure in severe depression periods is enhanced.

The competitive structure of the industry in which the business venture operates is a cardinal factor in risk. If the competitors are few, and if they are cost-and-profit conscious, the chances of success are enhanced. If, in addition, the particular enterprise is well balanced and has some special advantages over its competitors, success is assured. If the industry fills an important need in our economic life, it is likely to be more successful.

Appraisal of business ventures should be made at periodical intervals because conditions may change. While the funds committed to an enterprise cannot be withdrawn except under rare conditions, a decision can be made to employ more or less capital in the venture, to change the management, or even to accept the results of a forced sale.

The cardinal principle of a business venture, including real estate, is the long-term or semipermanent character of the commitment of capital because of the absence of ready marketability. Reward comes in the form of current income, except in those occasional instances where the business or the claims against it can be sold for a capital gain.

Chances of success are greatly enhanced when the creditor or owner of a business venture stands ready to employ his personal services and addi-

tional capital in times of emergency. If his personal service income also comes from the business venture, risks are compounded and concentrated, with the result that rewards will be greater or less than if the two sources of income are kept separate.

OTHER ESTATE BUILDING DEVICES

A third and an entirely different device for building an estate is *life insurance*. In its simplest terms, mutual life insurance is a mechanism by which a large number of persons of the same age pool each year an amount of funds sufficient to pay predetermined amounts to the beneficiaries of those of the group who die during the year. Expenses of the insurance companies are covered by the same means. It would appear that in a given year the estates of most of the members of the pool are reduced modestly in order to create large additions to the assets of a few. This is exactly what does happen. The risk of small loss, in return for the possibility of large gain to the estate in case of death of the producer of personal income, is sound business up to a reasonable amount. Unfortunately, some families are "insurance poor." However, presence of insurance in an estate makes it possible to take risks which should not otherwise be taken.

A fourth method of estate building is through the receipt of *gifts* and *bequests*. Normally the recipient is the passive factor in such transactions. However, the possibility or probability of such additions frequently is important enough to influence the character of the other risks chosen for the estate. Income, estate, and inheritance taxes frequently determine the timing of gifts.

SUMMARY

The discussion has been developed to this point:

First, that modest estates are built from savings out of the income of personal service.

Second, that large estates are generally built by means of business ventures. Sometimes they profit from the ultimate sale of part or all of the ownership of such venture. Since sale of a business venture to a large number of buyers by the route of marketable securities may produce a higher amount than would normally prevail through sale to a single purchaser, the goal of many manager-owners is to build their businesses to a size where they can sell their interests in the securities markets.

Third, that some quick estates are created by means of life insurance upon death of the insured. In addition, we should point out that life insurance contains an investment feature that will be discussed later.

Estates may also be built through gifts and inheritances. The possibility or probability of such addition to one's estate should be taken

into consideration and may affect the estate planning by the potential recipient.

MONETARY AND SAVINGS RESERVES

From this point we will be concerned primarily with the preservation of financial estates already built.

The function of money in an estate has been discussed briefly. Currency and demand deposits are classified as money, and an emergency reserve should be kept in that form. Since such funds produce no income, their function is entirely defensive, that is, preservation of monetary value.

American currency and demand deposits are dependent, today, largely on government credit. The principal assets of commercial banks are United States government securities and deposits of banks in Federal Reserve Banks. In turn, the principal assets owned by the Federal Reserve Banks are United States government securities with gold certificates the second largest item. Gold certificates in effect are nonnegotiable warehouse receipts issued by the Treasury, stating that an equivalent amount of gold is owned by the United States government and is earmarked as ultimate security for Federal Reserve Bank liabilities. Federal Reserve Bank liabilities in turn are chiefly deposits of banks and Federal Reserve notes, which are the principal component of our currency.

The second line of monetary defense of many estates is composed of time deposits in commercial or mutual savings banks. Modest current income is received.

Life insurance has been discussed as a device for building an estate quickly to replace some of the earning power of a deceased person. A second feature of life insurance is reserves accumulated by insurance companies from excess premiums, earnings, and favorable mortality experience. Policyholders have certain cash-surrender and loan-value claims against such reserves. They are ideal segments of a savings reserve. In fact, they represent the only assets readily convertible into cash which are available to many families in periods of depression or of unemployment.

Insurance premiums tend to become fixed in a family budget. In addition, the amount invested earns interest at a rate generally in excess of savings deposits and United States government securities. The policyholder does not know the amount of interest earned, and since it does not come into his possession, the saving and compounding of such amounts is painless.

The investment aspect of life insurance is ideal for most individuals as an adjunct to their insurance programs. It should be borne in mind, how-

ever, that a substantial part of the first year's premium and lesser amounts of premiums for subsequent years are consumed by salesmen's commissions and other acquisition costs.

In 1935, the United States Treasury created savings bonds which were unique in that (1) they were issued on a discount basis, (2) they could be presented for payment before maturity, and (3) they were designed to appeal to the small investor. It is the second feature, the fact that they can be presented for payment before maturity, that places the savings bonds in the savings reserve class. Seven series have been issued with somewhat different features, but they have all had the common characteristic that each certificate states the exact amount of money that can be demanded from the United States Treasury during each specified period of the life of the bond.

Monetary and savings reserves constitute an important section of an estate. A reserve of cash and demand deposits should be created early and retained for a real emergency. The smaller the estate, the greater the liabilities, and the higher the risks in the character of the personal service income and in the remainder of the estate, the larger the monetary and savings reserves should be. On the other hand, such reserves produce little or no income and thus should be kept small, in consistence with the factors just enumerated.

Claims against sound institutions such as (1) savings deposits in insured commercial and mutual savings banks, (2) cash surrender values, loan values, deposits, and so forth, with sound life insurance companies, and (3) United States savings bonds constitute savings reserves. They are convertible into a predetermined amount of cash at the owner's option after a possible modest delay at the option of the institution. There is no opportunity for gain and only a very remote chance for loss in such reserves in the predictable future. They do produce a modest current income. The amount of income is contractual in the case of United States savings bonds, some life insurance policies, and some commercial savings deposits, but the remainder pay such amounts as their own earnings justify after providing for appropriate reserves. This is particularly true of mutual institutions.

The chief function of monetary and savings reserves is to preserve and make readily available a predetermined amount of money. Income generally is incidental and may or may not be fixed in amount. The risk is monetary, that is, of value of the currency in terms of commodities or the value in terms of other currencies. One is a domestic purchasing power risk and the other is a foreign exchange risk.

When domestic prices are rising sharply, suitable hedges against such adverse economic forces should be sought in items which are not tied to

dollars directly, like common stocks or real estate or foreign exchange, if an analysis shows them to be available at satisfactory prices. Monetary and savings reserves should normally be kept low in amount during such adverse periods. Conversely, reserves should be high when domestic prices, real estate prices, and corporate earnings are declining. Both of these statements are true only if the plan of the estate calls for changes in the fundamental risk structure to hedge against and take advantage of changes in monetary purchasing power. The same question arises in connection with foreign exchange. It may or may not be part of the estate plan to take advantage of or to defend the estate from fluctuations in the exchange value of the domestic currency.

Funds awaiting employment for any reason will be carried in the monetary and savings reserves. Funds withdrawn from stocks or real estate or business because the price obtained is considered high may be retained in liquid form for months or years until bargains are available. This will be customary if the estate plan calls for doing some selling when prices of a class of assets or of an individual item is high and buying when bargains are available.

READILY MARKETABLE SECURITIES

When a security becomes readily marketable it is, in effect, short term at the owner's option, that is, the security can be sold when, as, and if the owner chooses. That gives the owner the privilege of changing his mind about his commitment. It is a privilege for which he is willing to pay a higher price and on which he is willing to take a lower rate of return than on a business venture. Because many want the privilege of marketability, the successful bidder is forced to pay high and thereby to receive a lower rate of return than if the same securities were not readily marketable.

The only personal efforts required in connection with readily marketable securities are decisions to buy, hold, or sell, and the placing of orders to carry out the decisions. Of course, much time and effort should go into preparation for making a decision. In contrast, the owner of securities in a business venture either is exercising some administrative function or stands ready to do so to protect his commitment.

Risks involved in ownership of readily marketable securities and the rewards for such ownership tend to lie between business ventures on the one hand and savings reserves on the other. Readily marketable common stocks are similar to business ventures but differ in that they can be disposed of at the owner's option. Highest grade, readily marketable bonds are similar to savings reserves in that they are credit obligations of almost riskless institutions, but differ in that they are convertible into cash

at the current market price whereas savings reserves are convertible into cash at predetermined amounts upon demand.

Current income from marketable securities tends to be greater than from savings reserves and less than from the same amount of principal employed in business ventures. The rewards from the various classes logically vary approximately with the risks involved. These generalizations about risks and reward should not obscure the fact that both risks and rewards vary widely within each class.

MONEY RATE RISK SECURITIES

The principal risks to which readily marketable securities are subjected are (1) money rates, (2) finance or credit, and (3) operations or earnings. All three types of risk are present with all securities, but in each case one is dominant and the others more or less minor. It is appropriate to classify readily marketable securities on the basis of these dominant risks. Logical names are *money rate risk*, *financial risk*, and *operating risk*.

Money rate risk includes those readily marketable bonds and preferred stocks which are relatively riskless, that is, they have strong financial positions and strong earning power in relation to modest debts and in relation to expenses. In other words, there is little, if any, credit risk, and normally the earnings fluctuations will not be violent. Yields of such items fluctuate in the same directions and at about the same times as do "money rates," but not necessarily to the same degree. Policies of our monetary authorities affect yields of money rate risk securities.

The major swings in money rates are quite long. As a matter of fact, they are too long for one to try to take much advantage of them, that is, there is little opportunity for the individual or the institution to sell money rate risk items when they are high, hold the funds unemployed, and buy when the prices of such items are low. That period of time may be many years if the past history of such cycles repeats itself. This does not mean that shifts should not be made between money rate risk items. Such securities are primarily of interest to institutions which have long-term liabilities. They are of interest to life insurance companies. They are of interest to trust funds where the trustees are attempting to keep risks at a minimum. They are of interest to other funds which need a substantial security of principal and the going rate for such items.

Too much attention has been devoted to the legal position of money rate risk items. While a strong legal position is important and desirable to have, it is secondary to the economic and financial strength in the institution which has issued the securities. The real test is the probability of payment of predetermined amounts of interest or dividends even

under adverse economic conditions. Such institutions should also have very strong financial positions so that any maturities can either be met by payment or by refunding.

At the present time, United States government securities fall in this classification, also most state bonds, many municipals, particularly if they have marketability, many utilities, particularly in the electric utility field, a few rails, and a few industrials. It is not, however, the industrial or governmental classification which makes a security fall into the money rate risk group. Rather it is the conditions prevailing in the issuing institution, that is, the fundamental earning power and strong financial position.

The problem, then, of the analyst is one of classification. Does the item qualify as money rate risk? It is a negative art; it is one of exclusion; it is one of drawing a line, above which items qualify and below which they do not qualify. Of course, there will be border-line cases, as there are in all classifications; but in case of doubt the item should be eliminated, because this group has the problem of providing substantial stability of price and certainty of regular income.

A few preferred stocks qualify where there is practically no question that the predetermined dividends will be paid. The absence of a maturity does not change the classification. What one buys in this classification is practically assured income and payment at maturity, if any.

Of course, we should hasten to say that the presence of maturity will influence price fluctuations. The shorter the maturity, other things being equal, the more nearly the price will approach the maturity amount.

FINANCIAL RISK SECURITIES

The second classification of readily marketable securities is *financial or credit risk*. Into this group one should put all securities of companies or institutions where there is a question as to the payment of principal, interest, or operating expenses, where there is doubt as to payment of any obligations of the institution. This includes not only bonds and preferred stocks, but also the common stocks of such companies.

Naturally one will need to make a series of subdivisions to indicate the legal differences between securities, but the entire group which has financial risk should be treated as a unit to see to what extent the fund has this kind of risk. There are some possible exceptions where a small senior issue of bonds is so widely protected by assets that even failure of the company would neither disturb its legal position nor its market position. Such items should be shifted to the money rate risk classification, but the burden of proof is on one who does so.

In this second classification, prices of the items will tend to fluctuate

widely with changes in the general estimates of the ability of the company or institution to pay its debts and expenses. These changes may be peculiar to the company or institution, or they may result from cyclical forces. In addition to the other risks, there may be present the risk of trading on equity, that is, there may be junior securities in this risk group which will tend to fluctuate even more widely than the senior securities, both in their price action and in the earnings which accrue to them. By this route risks can be pyramided and the gains and losses thereby compounded.

In this group it is necessary to analyze the financial position and the ability to generate cash from earnings. A high degree of skill is called for. Errors in judgment are costly. Possibilities are present for gain as well as for loss. Current income payments frequently are higher in relation to price, therefore, this class is very tempting. However, higher current income should be combined with the possibility of capital gain in this field if losses are to be provided for. It is by nature a high risk field.

OPERATING RISK SECURITIES

The third classification of readily marketable securities is *operating or earnings risk*. In this group one will normally have only common stocks. Those common stocks have only moderate, if any, financial or credit risk. In other words, we distinguish here, then, between common stocks which have and those which do not have an appreciable amount of financial risk. Earnings of companies which have operating risk common stocks will fluctuate with business conditions, with changes in the industry, and even with changes in the company, and the analysis here should cover that entire range; but if the classification is correct, there will be virtually no credit risk.

Items in this classification may be used for several different purposes. One is long-term holding for current income. Another is favorable secular trend. From the Civil War period, the belief has been held by many that a representative group of common stocks listed on the New York Stock Exchange will increase in value if held for a substantial period of time, owing to the fact that the secular trend of such prices was definitely upward. A corollary was that the stocks could be bought at any time, even at the peak of a cyclical swing, and that such a purchase would ultimately appear to have been at a cheap price, because successive cyclical peaks would be progressively higher. The 1929 to 1932 experience shook the confidence of many in this philosophy.

A study by the Cowles Commission,⁵ covering the prices of practically

⁵ Alfred Cowles, 3rd, and Associates, *Common Stock Indexes 1871-1937*, Principia Press, Inc., Bloomington, Ind., pp. 40-41.

all common stocks listed on the New York Stock Exchange, showed that the trend from 1871 to 1937, inclusive, was plus 1.8 per cent annually. Although the whole period shows a modest upward trend, there were long periods, such as 1879 to 1899, 1901 to 1923, and 1926 to World War II, when the intermediate secular trend was substantially sidewise. During the period 1871 to 1937 the Cowles Commission found that, where cash dividends were reinvested in the same stock included in the preceding index, the trend was plus 6.9 per cent annually, thereby producing an annual dividend income of approximately 5 per cent of the current price during the entire period. While certain family units and institutions have, no doubt, built estates by holding a representative group of common stocks over a long period of time, long-term holding can be justified more from the dividends that are produced than from market appreciation or capital gain.

Others buy stocks in this classification for short-term capital gain. While accurate statistics are not available, it is reasonable to believe that the results achieved by the average nonprofessional are negative over a period of years. Trading in the stock market still is in the art stage, despite the tremendous amount of research that has taken place. In analyzing an estate which employs this method of operation extensively, due allowance should be made for large risks involved.

A third method is to buy such items only when they are bargains. This requires individual valuation of the item. It requires the determination of some normal or average value, which should be one on which the average dividends are expected to be a satisfactory return and which the holder should be able to sell at a profit, if he so chooses.

In regard to forecasting long-term earnings of corporations, and also in regard to typical price-earnings relationships, any application of these ideas should be quite general and allowance should be made for wide margins of error. It should also be pointed out that all items do not fit into a pattern and that this method of operation should be restricted to those items which have some reasonable relationship of price to earnings and in which the cyclical character of the price action is quite typical.

A fourth method of operation is not only to buy cheaply but also to attempt to take some cyclical profits in order to offset inevitable losses. In other words, the price of a stock, which tends to be cyclical in action, does swing so substantially above and below its long-term value that opportunities are presented for purchase below that value and for sale above. This is called *area operation*. It requires the determination that the market is high or low, even though one may not have an opinion as to which way it is going in the immediate future.

BALANCING AND HEDGING RISKS

Managers of many investment funds attempt to change, from time to time, the proportions of their funds which are exposed to different types of risk. They attempt to defend the fund against adverse secular trends and cyclical swings and to participate in favorable trends and swings. They try to hold financial and operating risk securities only while the secular trends are favorable. They want relatively more monetary and savings reserves and monetary rate risk securities during the transition from inflation to deflation and relatively more financial risk and operating risk securities under reverse conditions. Much progress has been made in the science of business-cycle forecasting. Some managers believe they can rely upon these forecasts for making major changes in fund structure. Others believe they can recognize the business-cycle phase but disclaim ability to forecast the turning points. A third group employ mechanical devices whereby the fund or the level of the market provides the signal for changing risk. This third group employs various "formula methods."

Only a few of the plans will be mentioned. Vassar College has employed the so-called "Vassar Plan" with a part of its endowment funds. The plan was based on a study of market action from 1930 to 1938, and the college decided that, when stocks in the Dow Jones Industrial Average were near the high of that range, they did not care for any, and, when stocks were near the low of the range, they wanted many stocks. Those responsible for the plan decided that the average mean monthly price for the base period was around 135, and so they started the fund with 50 per cent of volatile items or stocks around that level. When the average became 125, they would increase the stocks to $66\frac{2}{3}$ per cent of the fund, at 115 to $83\frac{1}{3}$ per cent, and at 105 to 100 per cent. When prices of stocks were rising and had reached 150, they would be reduced to $37\frac{1}{2}$ per cent, at 165 to 25 per cent, at 180 to $12\frac{1}{2}$ per cent, and 195, no stocks. So long as the market fluctuates within that general area, the results should be quite satisfactory.

If an extreme inflationary period should set in for an extended period of time, stocks might stay above 195. The fund would not participate either in any increase or any income from stocks if the averages stayed above that level. If conditions should be such that the market should be below 105 for an extended period of time, the entire part of the fund which is operated under this formula would be entirely committed to stock. The success of this type of operation depends upon the similarity of the future to the past period.

In contrast, the "Yale Plan" attempted to use the 1929 to 1932 extreme period as a base. The fund was set up under normal conditions with

about 30 per cent in stocks. This amount would be maintained until the value of the stocks rose to the point where they became 40 per cent of the fund. At that point enough stocks would be sold to reduce them to 35 per cent of the total. If, on the other hand, stocks should decline, there would be no buying until stocks had been reduced to 15 per cent of the fund, at which time sufficient stocks would be purchased to bring them back to 20 per cent of the fund. That operation would be repeated as often as the opportunity was presented.

We should point out that to increase stocks from 30 to 40 per cent of a fund, when they represent 30 per cent of the total, requires approximately a 50 per cent average increase in the market, and to obtain a buying opportunity through reduction of stocks from 40 to 15 per cent of the fund means a decline of approximately 75 per cent in the market. Such a fund would produce phenomenal results if we continue to have swings like the 1929 to 1932 period. In less violent swings, such a fund would go for many years without a change.

Formula methods are simple and have much to commend them if the plans are reasonable and soundly administered. Basically, formulas are predicated on the principle that a fund should carry more volatile securities up than it carries down through any given price area. For instance, starting with point A, there will be \$100,000 of the fund, or 50 per cent or some other predetermined amount or percentage in common stocks. When, as, and if the market goes up from A to B, either the market or the fund will touch off a signal requiring the risk to be reduced. When, as, and if the fund goes down from B to A, it will carry down in stocks only \$90,000 or 45 per cent of the fund or some other amount. If the plan is followed successfully the fund will do better than the averages, assuming that the selection of items is as good as the averages.

Another feature of the formula method is that it, in effect, provides for selling in a rising market and buying in a declining market. The trader, on the other hand, normally attempts to sell at or beyond the peak and buy at or past the bottom. The two methods are based upon distinctly different philosophies. They require different temperaments. For many people a predetermined plan, no matter how poor, is better than one determined in the heat of battle.

Those who have studied military tactics know that it is sound to lay out a campaign before a battle and a series of one or more alternative plans, depending upon certain things happening. Also, in every offensive campaign it is wise to have a well-prepared plan of retreat. If it is sound military tactics, it is sound financial tactics to have a plan. If a formula or a predetermined plan will help, it certainly should have very serious

consideration. We should say, however, that as with most things of this type, they are not a panacea for everything and should be used with care.

SUMMARY AND CONCLUSION

In summary, then, our problem is to balance and hedge income from personal services, income from business ventures, the life insurance program, and potential gifts and bequests with monetary reserves, savings reserves, money rate risk securities, financial risk securities, and operating risk securities, in the light of the particular expenses and liabilities of the financial estate, in such a way as to get the desired combination of rewards in the form of current income, capital gains, market value gains, preservation or gain of monetary value, and preservation or gain of purchasing power that we believe is appropriate for the individual case.

With all of these variables it is easy to see that a single-plan job cannot be prepared to fit all cases. It is definitely a custom-built job.

In conclusion, if the young men in the investment banking business expect to make a secure place for themselves in the financial world, they will have to become counselors of their individual and institutional clients with reference to their entire financial well-being and recommend changes in their respective portfolios from that standpoint. Even the entire securities portfolio is only a part of the whole problem. It will be necessary to help them balance and hedge their risks and rewards in accordance with a sound predetermined plan.

REVIEW QUESTIONS

1. What are the five forms of economic returns that may be realized by economic activity?
2. What factors must be considered in measuring economic rewards?
3. Describe how the administration of income during the early stages of a man's economic life would vary under the following circumstances:
 - (a) The young man who has a high degree of social security through employment by a large corporation that has liberal pension and profit-sharing funds.
 - (b) A salesman whose sole income is sales commissions.
 - (c) The young professional man.
 - (d) A young man employed by a small company in which he is expected to purchase stock.
 - (e) A young man whose income is more than ample to cover expenses.
4. What analysis is made of the employing company in determining the personal investment policies desirable for the employee?
5. How do the characteristics of an individual's personal service income affect the requirements of a conservative program for financial estate planning?
6. What are the methods by which estates are built?
7. What are the investment features of life insurance?
8. What is the function of monetary and savings reserves in an estate?
9. What assets comprise savings reserves?

10. What are the inherent risks in a monetary savings reserve?
11. What are the opportunities for capital appreciation if investing solely for the benefit of long-term secular trend?
12. What are the principal risks to which readily marketable securities are subject?
13. What are believed to be the long-term results achieved by the average nonprofessional investor who purchases for short-term capital gains?
14. What are the problems encountered when pursuing the policy of buying common stocks only "when they are cheap"?
15. Explain the theory behind the so-called "formula methods" for investing in common stocks.
16. What is the objective of investment management?

INVESTMENT TRUSTS AND INVESTMENT COMPANIES

by Alec B. Stevenson, *Vice President,
American National Bank, Nashville*

IN THE LANGUAGE of the investment markets, the terms *investment trust* and *investment company* are used interchangeably to denote a certain type of investment organization. As will be seen later, there are certain technical differences between the two, but these do not affect the general purposes of the organizations, and to only a minor extent do they affect their operations, and then only with respect to more or less mechanical details. So far as this study is concerned, the term *investment company* will be used in general discussion to apply to both the trusts and companies.

In broad outline, an investment company is a financial institution designed to assemble a large aggregate investment fund from a multitude of individual contributors, and to provide for the fund a caliber of management and a degree of diversification ordinarily beyond the reach of any of the individuals concerned. This is a definition which might not only at this time readily include institutions other than investment companies, but also would certainly have included some of them in the earlier stages of their development. In one classification or the other might be mentioned mutual savings banks, trust companies, life insurance companies, fire insurance companies, canal companies, mortgage companies, Federal Land Banks, common trust funds, holding companies, employees' benefit associations, and so forth. Indeed, the early history of the investment company in the United States, so far as it can be ascertained, is rather closely connected with the development of many of the institutions just mentioned, although the similarity of some of them to the investment company is perhaps not very marked at first glance. The common characteristic of all these institutions is the pooling of investment funds. Later American investment company development was influenced not only by these historical origins and by the developing character of the American economy, but also by the example and experience of the British investment companies.

The investment company today plays an important role both in investment management and in investment banking. Investment management has been defined as "the development of a systematic plan for the selection of those securities best adapted to meet the financial objectives of the particular investor."¹ Under the complex conditions of modern financial organization and economic interdependence, the need for such a plan will at some point usually involve the necessity also for professional research into the nature of these conditions, and into methods for adapting an investment plan to them. Professional investment management agencies, broadly speaking, include the investment companies, the trust institutions, the investment counsel firms, and the investment bankers. Whether because of availability or suitability, any one of the four types of agencies may be preferable at a given time for a given individual. It is difficult to say which type is at present the most important, but it is believed that the growth and development of American investment companies since 1926 may have been more rapid, proportionately, than that of the other agencies mentioned.

Since investor participation in investment companies is had by the purchase of shares, the investment company business is of importance to investment bankers. Sale of the shares of open-end investment companies alone is believed to be running currently at the rate of approximately \$200,000,000 annually. Aside from this there is a large but indeterminable total of trading in the shares of the closed-end companies, both on and off the national exchanges. Furthermore, the investment companies are, as reservoirs of capital, important outlets for the merchandise which the investment banker handles whether it is seasoned or new.

HISTORY AND DEVELOPMENT

In order to understand the institution as it exists in the United States today, it is necessary to pay some attention to the origins of the investment company. Though the investment company had some rather early ancestors in this country, their modern descendants did not reach full growth until long after the cycle had been completed in Great Britain. After the close of the Napoleonic Wars, England became a wealthy creditor nation, in fact the leading creditor nation of the world. The limited demand for capital for home employment and the large demand for capital for the financing of foreign governments, for the development of colonies and of private industry in foreign countries themselves, all insured

¹ Edwards, George W., *Corporation Finance and Investments* (Investments II), American Institute of Banking, Section American Bankers Association, New York, 1935, p. 417.

that she would be committed to a policy of capital export. By shortly after the middle of the nineteenth century the tremendous dynamism of the machine age, together with England's creditor position, had created conditions extremely favorable to the formation of investment companies and similar aggregations of capital. To the landed and already rich gentry had been added considerable wealth, and there had been created new members of the leisure, investing class. In general, money and prosperity were much more widely diffused than in earlier periods. With the declining rate of interest on British Consols, investment abroad became more attractive, while at the same time the private investor was handicapped by the difficulty of obtaining sufficient information about foreign investment conditions. The speculative excesses of 1822-1847 meanwhile had underlined the necessity for a better mechanism to guide the stream of investment capital, since by the latter date British investment was found in practically every quarter of the globe.

BRITISH COMPANIES

It is generally supposed that the first investment trust formed in Europe was the *Société Générale de Belgique*, founded in Brussels in August, 1822. A similar Swiss and a French company were organized in 1849 and 1852, respectively. However, conditions did not turn out to be so favorable upon the Continent to the growth of investment companies, and it is thought that these companies had little influence upon development of the movement in England. The London Financial Association, the International Finance Society and Foreign and Colonial Government Trust, organized in the period 1863-1868, were apparently the earliest British investment trusts. Initial impetus developed considerably between the late seventies and late eighties, when about 50 investment companies were organized. However, the organization of new investment trusts in Great Britain was mostly confined to three periods: these were 1887-1890, 1909-1914, and 1927-1929.

Most of the development of British investment trusts occurred after 1879. Commodity prices in Great Britain declined almost continuously from 1873 to 1895. Trade activity did not expand fast enough to absorb available money and credit. Surplus of funds went into Stock Exchange securities, accompanied by rising prices and lower interest rates. During the period from 1863 to 1890 the investment company as an institution was in a formative stage, few restrictions being imposed upon the powers of the trust managers. The expansion characteristic of British imperialism in the eighties, together with general speculative excesses, finally culminated in the Baring crisis and the panic of 1893, followed by an investment trust house cleaning.

From this point onward the trend of British investment company management was much more toward the conservative side, and the general pattern became confirmed as that of intelligent, conservative, full-time management operating a diversified investment portfolio for investment purposes and not to exercise or gain control of corporations through portfolio holdings. Only brought to an end by World War I in 1914 was a long period during which the British and Scottish investment companies had invested heavily in North and South American securities, mainly in those of the railways. In those days it was no unusual thing to find British directors on the boards of United States railroads; and there are still outstanding and listed on the New York Stock Exchange American railroad securities originally issued in London.

Great Britain's position during most of the period 1863-1917 having been that of an exporter of capital, the British investment company developed two tendencies which did not appear to any large extent in their American counterparts. First was a substantial participation in overseas investments, and, as a natural consequence, second, a considerably larger part in the underwriting of new issues of securities than has been customary in the United States. The history of British investment companies and their methods of operation and policies have nevertheless played an important part in determining the lines of growth of American investment companies.

AMERICAN COMPANIES

Though it was to be 75 years before there appeared in the United States an organization which approached the American management investment company as we know it today (Boston Personal Property Trust, 1893), there was formed in 1818 a company which in principles of organization and operation clearly foreshadowed the modern American investment company. This was the Massachusetts Hospital Life Insurance Company, of Boston. This company and others founded slightly later not only wrote insurance and took banking deposits but also held funds in trust, known at that time as *endowments in trust*. A similar company was the Farmer's Fire Insurance and Loan Company (now City Bank Farmers Trust Company), incorporated on February 28, 1822, as a fire insurance company and to make loans to farmers, but granted trust powers by early amendment to the original charter. In 1827 the Newark Savings Fund Association was incorporated, possessing broad powers which may have enabled it to do a trust business, but which also resembled those of an investment trust. Ordinarily, trust funds in institutions like these were pooled, the companies receiving a fee for the management of the funds as a whole.

As late as 1871 the by-laws regulating terms for the trusts and agencies of the New England Trust Company indicate that considerable trust business in Massachusetts was still largely of the nature of the investment trust, though other forms of personal trusts were distinguished. The following quotation from the by-laws indicates rather clearly the similarity between the present-day mutual investment company (to be discussed later in this text) and the trust arrangements of 1871.

This Company will receive money, and on the first day of the calendar month next after the expiration of sixty days from the receipt thereof, will cause the same to be invested or put on interest for the benefit of the beneficiaries, either separately or with other funds belonging to or in care of the corporation, as the Directors may from time to time determine, or as may be expressly agreed. After deducting for the company compensation at the rate of 5% on the gross income, and all necessary expenses attending the trust (except office expenses and salaries of the company's officers and clerks), the Directors will once a year declare such dividends of all the net earnings, gains, increase, and profits arising from such investments, as in their opinion can be safely done without affecting the amount of the capital; and its proportional share thereof shall be deemed to be the income of each trust fund.

INFLUENCES ON EARLY DEVELOPMENT

Although the principle of the investment company had been known and applied in the United States for many years, there are a number of reasons why its development on a scale similar to that which occurred in England was delayed until a much later date. Among the reasons retarding development were: the investment banker system of investing funds in the United States in contrast to the system which was in vogue in Great Britain, namely, distribution through solicitors, or business agents, who represented many individual investors; the fact that the great continental area of the United States was many decades behind England in industrial development, so that the demand for capital was far greater than could be supplied by purely domestic sources; the fact that the moneyed class, although possessed of substantial resources, was small in number, there being no widespread numbers of moderately wealthy investors as in England. The preference of small American investors for mortgages, real estate, and bonds was not, moreover, conducive to the promotion of companies formed to invest in a cross section of securities, particularly common stocks, to be supervised by professional managers, at least up to World War I.

In a few instances, concentrations of wealth invited professional management. In one locality, however, and among one class of individuals, there did develop a concept of private trusteeship which later had considerable influence upon the development of a certain type of investment

company. As early as the 1820–1830 decade, the profession of private trustee came into prominence in Boston. From that time onward the *Boston trustee*, with his tradition of specialized independent service and advice in family financial affairs and property interests, has played an important part in the conservation of New England wealth. Even at the present time third- and fourth-generation Boston trustees are said to have under their control and administration many hundreds of millions of dollars. As sound investment advice became more and more generally sought, it was natural both that Boston trustees should become associated with investment companies and that, occasionally, groups of investors should seek the services of Boston trustees, for the administration of an investment fund.

Although the period of most rapid growth of the investment company movement in the United States was subsequent to 1921, the groundwork was laid and some sporadic growth occurred in the first twenty years of the present century. The causes of rapid investment company development were in the main those which produced the same results in England. That is, the United States after World War I became a creditor nation in much the same general position as was England after the Napoleonic Wars, with, likewise, a vast diffusion of wealth. Even before World War I there had been much consolidation of industrial companies in the “trusts” of those days, accompanied by large increases in share capitalizations and increased trading on the exchanges, and the concept of intercorporate ownership and control had advanced rapidly. Accordingly, up to 1921 the sporadic development of investment companies was largely associated with various financial institutions which owned and managed security portfolios not always as a primary business nor as strictly *investment* portfolios.

Generally speaking, the institutions which had the most important effect upon the formation and development of investment companies were:

1. Savings banks, life insurance companies, trust funds, and security affiliates of banks.
2. Fire insurance companies.
3. Holding companies.

CLASSIFICATION OF AMERICAN INVESTMENT COMPANIES

Under the very general definition of investment company given at the beginning of this chapter, it is clear that a wide variety of organizations, whose principal characteristic is their use of pooled funds, could be included. Excluding commercial banks and savings banks, as well as life, fire, and casualty insurance companies and mortgage companies, we are

still left with a considerable range of organizations which could be more or less accurately defined as investment companies. Some of these organizations were of more importance twenty years ago than they are now, but all are still met with to some extent. A convenient classification results in six main groups:

1. Common or commingled trust funds.
2. Companies issuing face amount installment certificates.
3. Installment investment plans.
4. Fixed or semifixed investment trusts.
5. Holding companies.
6. Management investment companies.

The common or commingled trust fund is an investment company in the sense that it is a fund contributed to by many individuals and operated under one management. However, the management is always that of a single trust institution which uses the device to secure economical administration of the assets of many trusts. Participation in these funds is not open to the general public, but their use is growing.

The face amount installment certificate is a device designed to provide small investors, in return for a monthly payment over a stipulated period of years, with a guaranteed sum of money at the maturity of an individual contract. In many respects it is similar to an endowment life insurance policy, but the investments of the companies issuing these certificates are of a nature much more comparable to the portfolios of investment companies than those of life insurance companies.

Installment investment plans are not, strictly speaking, investment companies at all. Rather they constitute methods by which shares in conventional investment companies may be acquired on the installment plan.

The fixed or semifixed investment trust was extremely popular in the late twenties. Essentially it consisted of a definitive deposit of specific securities in the hands of a bank as trustee, which issued participating certificates in the fund. These certificates could be surrendered at any time in return for the cash value of the aliquot share of the fund represented, or, under certain circumstances, for the aliquot share itself in kind, with cash adjustment. However, the trustee had no power to change the investments once deposited.

The holding company was a familiar means during the 1920's for acquiring financial control and domination of vast property. It was and is a corporation owning substantial amounts, usually working control but sometimes majority control, of a number of companies, frequently in the

same industry. The device was most often used, perhaps, in the public utility industry. The extent of control thus developed in the industry later led to enactment of the Public Utility Holding Company Act, forcing disintegration of many of the holding company systems. In form and structure holding companies do not particularly differ from investment companies. The essential difference is in intent. That is, the holding companies have been usually formed for purposes of control rather than for those of pure investment, and the public has often been invited to participate more for the purpose of furnishing capital than for that of receiving investment management.

MANAGEMENT INVESTMENT COMPANIES

The type of investment company which is most frequently met with today is the management investment company, a term which in itself includes a considerable variety of companies. Again the question of intent or purpose is largely determinative as to whether or not a given company belongs in this class.

The Securities and Exchange Commission under special authority contained in the Public Utility Holding Company Act of 1935 made a voluminous and exhaustive study of investment trusts and investment companies and laid down certain classifications in that study. The Commission recognized the difficulty of determining an exact line between the holding company and the management investment company proper, and introduced as one classification the *management investment-holding company*.

In general, the Commission found most management investment companies proper (as distinguished from management investment-holding companies) among the companies with investments primarily in diversified securities in a number of blocks of such small size "as to be of negligible significance with respect to control or influence." There are, however, certain companies properly classified as management investment companies which approach the holding company type. That is, a substantial proportion of assets will be concentrated in a few holdings, in respect to many of which working or actual control will be represented, with the investment company furnishing to the companies thus represented some managerial services and advice. Investment companies following this policy do not as a rule, however, intend to retain permanent control or influence, but rather to develop such situations over a period of time to such an extent that substantial capital gain may be had, replacing such commitments from time to time with others thought to be then more attractive. These two types of companies are ordi-

narily designated as diversified and nondiversified management investment companies.

Regardless of this division, management investment companies proper were also subdivided by the SEC into *open-end* and *closed-end* companies. In the closed-end type no provision is made for the day-to-day issuance, repurchase, or redemption of shares, but, as in any other corporation, the owner liquidates or disposes of his interest by selling his holdings in the open market. The price received is determined by the market and he cannot compel payment of his proportionate share except under conditions of liquidation, bankruptcy, and so forth. Usually the entire fund to be managed by a closed-end company is raised at a single time, though there is no reason except market conditions why fairly frequent issues of shares or other securities may not be made, as is the case in England.

The open-end company, on the other hand, is characterized by three important differences. In the first place, by declaration of trust or by the by-laws, the company obligates itself to redeem or repurchase shares, when offered, at or approximately at actual *liquidation* or *net asset* value. In the second place, and as a natural result of this policy, the companies are committed to continuous daily offering of new shares, offering price also bearing a fixed relation to liquidating value. From time to time, however, an open-end company may decide not to offer any further new shares for a period of time. This decision is usually reached when it is felt that the total of assets under administration is as large as it need be for efficient administration. Since the redemption privilege is not suspended at the same time, such funds gradually decrease in size, and at some later date resume daily share offerings.

The third characteristic of the open-end company is that its capitalization consists of one class of shares and (with a single exception) that it has no funded debt.

ORGANIZATION AND CAPITAL STRUCTURE

With trifling exceptions, management investment companies, whether open-end or closed-end, take one of two forms, the trust or the corporation form. The form of organization itself has little effect upon policies or methods of operation, since in either case the organization is a business entity in the business of investing money for profit and income. Like any other corporation, the investment company in corporate form has its charter and by-laws, its board of directors and its officers, and is subject to the ordinary corporation laws of the state of its domicile. Its capital structure may include all the kinds of shares, bonds, and debentures,

warrants and options, and so forth, usually to be found in the typical American corporation.

The trust form of investment company is sufficiently different to require more extensive comment. The so-called *business trust* or *Massachusetts voluntary trust* is similar, but, prior to the popularization of the investment company in trust form, has usually been met with mainly in New England, and in some of the western states where it has been used rather extensively in the promotion of oil and other mineral developments.

As in the case of any trust, the *investment trust* contains the four essentials: the trust property itself, the trustees who hold title to it, the contributors or trustors who place the property in trust, and the beneficiaries (the holders of the trust certificates). There is a declaration of trust in which the settlors are also the trustees and agree among themselves to form a trust for the benefit of the persons who may contribute to the trust fund. The interests of the contributors to the fund are represented by transferable certificates of beneficial interest, and the contributors are the beneficiaries of the trust and the equitable owners of the fund, while the trustees are the legal owners. However, it is usually stated that ownership of a share does not vest in the shareholder any title to any specific part of the trust property. His share ownership entitles him merely to receive his pro rata of distributable income and gain as determined by the trustees, and to receive his pro rata of asset value upon surrender of his share. Nor does the death of a shareholder during the continuance of the trust operate to determine, that is, to terminate, the trust.

Since all of the states have comprehensive corporation laws stating in more or less detail the rights, obligations, and so forth, of corporations and their shareholders, the incorporated investment company does not have to set out in so much detail in its charter and by-laws these and allied matters. But the investment company in trust form must spell out matters in considerable detail in its declaration of trust, since the powers and rights of the trustees (who are the managers of the trust) are no greater than specifically allowed by the terms of the trust, and since the same can be said with respect to the beneficiaries or certificate holders. Accordingly, typical declarations of trust limit the liability of trustees, except as such and not in their personal capacity; expressly declare that a trust and not a partnership is created and that the certificate holders are not liable except to the extent of any unpaid portion of their subscriptions. Furthermore, whereas an ordinary private trust is frequently terminated by the death of the beneficiary, the investment trust is not so terminated, the certificates being personal property of the beneficiary and

his death only entitling his executor or administrator to the rights which the decedent had.

The trustees are usually self-perpetuating, though they may be removed for cause by shareholders, and, in some cases, provision is made for shareholders to vote annually upon the election of trustees. (In this as in other matters, provisions of the Investment Company Act of 1940, which will be commented on later, affect the provisions of the declaration of trust.) In accordance with the rule against the creation of perpetual trusts of certain kinds, investment trusts have a definite termination, usually twenty-one years after the death of the last survivor of certain persons specified in the declaration.

Investment powers of the trustees vary rather widely in accordance with the purposes for which the trust is created. Usual provisions include those for diversification but, as a rule, no limitation as to the quality of investments is imposed.

DISTRIBUTION AND PRICING OF SHARES OF OPEN-END COMPANIES

Whether an open-end company is in trust or corporation form, the fact that the company is obligated to redeem its shares at approximately net asset value upon demand results in certain special operating and structural characteristics. Since, if no effort were made to sell shares to new investors from day to day, the normal redemptions would eventually reduce the company's funds to a low point, the open-end company usually arranges an underwriting or distribution contract with an individual or firm who is spoken of in the Investment Company Act of 1940 as the *principal underwriter*, although, in fact, he does not assume an underwriting risk in the strict sense of the term. A more ordinary term in the investment company business is *sponsor*, and the function performed is that of general distributor or wholesaler. The sponsor has the sole right to purchase shares at the net asset value from the company itself, the shares to be resold at a profit to retail investment dealers who in turn will sell them to the general public. The public pays for the shares a premium usually fixed at not over 8 per cent of the liquidating value of the share plus the 8 per cent; that is, retail offering price would be 100/92 of the liquidating value of the share. It is believed that current distribution premiums are somewhat lower than this, perhaps around 7½ per cent, on the average, of the offering price. Further, many funds make a practice of reducing the distribution charge on purchases above a given limit, sometimes as low as \$25,000, sometimes as high as \$100,000. Under such circumstances the charge may be as low as 1 per cent.

Somewhat lower premiums, on the average, are charged by the special

kind of open-end companies known as *investment counsel type funds*. These are funds sponsored by investment counsel firms who sell the shares direct to the public without the intervention of an outside organization. They have usually been formed by such firms for the purpose of providing, for funds too small for individual administration by the firm, the same type of service which the larger accounts receive. Premiums are sometimes as low as 1 per cent or 2 per cent (though several are higher), regardless of the amount of the purchase.

As a matter of convenience the sponsor is usually authorized by the fund to act as its agent in repurchasing shares, subject to revocation of the privilege by the fund itself. Because of the nature of the business, sponsors have the best facilities for accepting telephoned or telegraphed orders for the repurchase of shares. Repurchases made by the sponsor are paid for by the custodian bank upon authorization by the fund, and the details are also forwarded daily to the management of the fund.

The sponsor usually makes arrangements with a group of retail dealers in centers all over the country for distribution of the shares of the fund to the public. In return for a fixed percentage or percentages of the spread, retail distributors agree to purchase shares only from the general distributor or from their own customers at not more than net asset value and to sell shares only to customers at the public offering price in effect, or to the fund itself, or to the general distributor as agent for the fund, at the currently quoted bid or net asset price. Retail distributors of the shares of open-end companies include stock exchange members, securities underwriters, dealers and brokers of all types, but few who distribute nothing but the shares of such funds. Most, in addition to regular stock and bond underwriting, trading, and distribution, handle several funds under sales contracts with the general distributors. Various leading mutual investment fund sponsors have had from time to time as many as 300 to 700 active dealers on their books.

CUSTODIAN OF ASSETS OF OPEN-END COMPANIES

Another special characteristic of the open-end companies is that virtually without exception invested assets and cash are in the hands of an independent custodian, although neither the Investment Company Act of 1940 nor the charters or declarations of trusts of all open-end companies make such a practice mandatory. As a practical matter, owing to the substantial volume of share issuance and share redemption, it is convenient and probably economical as well to have custodian functions performed by the same agency as that which handles share issuance, share redemption, transfers of certificates, and so forth.

Custodian agreements usually contemplate the employment of a bank

or trust company for the following purposes: to hold and dispose of all deposited property subject to the instructions of the management of the fund; to execute orders for purchase and sale of property in the investment company, and to receive and deliver such property and to receive and make payments therefor; to act as dividend disbursing agent for the company; to act as accountant for the company, with daily reports; and to compute net liquidating value of the shares and attend to all details in connection with the issuance, repurchase, and transfer thereof. These arrangements allow the management of the company to devote its attention primarily to the management of the portfolio.

PUBLIC REGULATION OF INVESTMENT COMPANIES

Before examining the investment policies and practices of management investment companies, and their investment performance, it is necessary to pause and take some account of the size of the investment company industry itself and of some of the tendencies in the past which resulted in regulation. Various pieces of legislation have substantially conditioned the actual operations and policies of the companies.

When public regulation became an issue in 1935, public participation in the securities of investment companies had reached substantial proportions. The SEC estimates the total amount of securities included in registrations with it from July 27, 1933, to December 31, 1937, at \$1,788,000,000. Registrations of the securities of investment trusts and investment companies constituted about 15 per cent of both the total number and the estimated dollar amount of *all* new security registrations under the Act during the period noted. The SEC estimated total securities holders of various types of investment companies at the end of 1935 at approximately 1,720,000, of which 70,000 were owners of debentures, 250,000 were holders of fixed trust certificates, and about 1,400,000 were holders of management type investment company shares. (These figures exclude holders of investment-plan certificates, face-amount installment certificates, and the participants in common trust funds.)

Estimated sales of investment company securities during 1936 and 1937 were approximately \$400,000,000, of which more than half consisted of shares of open-end management companies. Sales of investment company securities during the two years just mentioned were important in the total of corporate securities (excluding refunding issues) sold to individual investors, aggregating approximately one sixth of the estimated \$2,500,000,000 of such corporate issues disposed of.

The great speculative era of 1920-1929 in the United States was characterized by abuses which were made easier if not actually encouraged by the attitude of the public. But the stirrings of reform were at the

same time in evidence. Aside from discussion of the English Companies Act in connection with investment companies, there was discussion of federal incorporation for all companies in the United States. The Governing Committee of the New York Stock Exchange on July 24, 1924, adopted a cautionary resolution regarding participation by exchange members or firms in investment trusts which "do not properly protect the interest of investors." There were advocates of more publicity as to the details of operation of investment companies. In July, 1927, New York state began an investigation of investment companies, and was followed by California, New Jersey, and Maryland, while California and Utah adopted regulations governing the activities of such companies.

LEGISLATION IN GENERAL

Considering the history of the previous years, particularly from 1920 onward, it was only natural that a great deal of this legislation should have concerned itself with financial and investment matters. As events turned out, investment companies were affected by the Securities Act of 1933, the Securities Exchange Act of 1934 and amendments, the various Federal Revenue Acts, and, finally, by the Investment Company Act of 1940, which was based upon the investigation carried on by the SEC under authority of the Public Utility Holding Company Act of 1935.

The Securities Act affected all companies, including investment companies, whenever they offered new securities to the public. The effects were perhaps more immediate upon the open-end or mutual investment fund type, since these companies were making continuous offerings of new shares to the public and thus were obliged more frequently to file voluminous registration statements with the SEC.

The Securities Exchange Act, regulating trading upon national exchanges and (by later amendment) over-the-counter trading, substantially affected the mechanics and methods of distribution of investment company shares, both of the closed-end and open-end types.

EFFECT OF TAX LEGISLATION

The Revenue Act of 1936 changed the tax status of corporations by subjecting to tax the dividends received by them on stocks which they owned. From the standpoint of the investment companies, full application of the provisions of the Code would have meant a considerable hardship and a distinct sales disadvantage, since dividends in the hands of their shareholders would have been taxed three times, once as earnings of the corporations which paid dividends to the investment companies, once in the hands of the investment companies, and again in the hands of their shareholders. Conferences with authorities in Washington resulted in

modification of the proposed legislation so that, provided the investment companies complied with certain specified methods of operation, dividends and other investment income passed through their hands virtually without tax. The theory of this accommodation was that an investment company can more properly be described for tax purposes as an investment *trust*, merely a conduit through which earnings pass and are distributed to the owners. Succeeding revenue acts made minor changes, but the Revenue Act of 1942 substantially altered the picture.

The new Act (under a special supplement, Supplement Q) sets up a separate method of taxation for investment companies complying with certain requirements of the statute. The method of taxation affects shareholders of such companies also. The Supplement applies to all investment companies meeting the statutory requirements, and those of both open-end and closed-end types so qualifying and continuing to qualify are called *regulated investment companies*.

The regulated investment company is defined as one which at all times during the taxable year is registered under the Investment Company Act of 1940 as a management company or as a unit investment trust, provided that:

1. At least 90 per cent of its gross income for the taxable year is derived from dividends, interests, and gains from the sale or other disposition of stock or securities; and

2. Less than 30 per cent of its gross income for the taxable year is derived from the sale or other disposition of stock or securities held for less than three months; and

3. Its portfolio during the taxable year meets prescribed standards of diversification of investments. Broadly, it is provided that at least 50 per cent of the company's assets shall consist of diversified securities and cash; and also that not more than 25 per cent of the company's assets shall be invested in the securities of any one issuer, or of two or more issuers which the taxpayer controls and which are engaged in the same, similar, or related businesses (exclusions from the foregoing limitations are provided with respect to government securities and securities of other regulated investment companies); and

4. The company files with its return for the taxable year an election to be a regulated investment company, or it has made such election for a previous taxable year which began after December 31, 1941. As pointed out in the Senate Committee report, *the election once made is irrevocable*, and if for any given subsequent taxable year the investment company satisfies requirements (1), (2), and (3), it will be considered a regulated investment company.

The effect of the tax provisions of Supplement Q is (in general) as follows:

1. A regulated investment company distributing to its shareholders during the year ordinary taxable dividends from investment income equal to the full amount of such net income will not be subjected to the normal corporate income tax or surtax thereon; and

2. A regulated investment company distributing to its shareholders during the taxable year in the form of "capital gain dividends," *so designated*, an amount equal to the excess of its net long-term capital gain over the net short-term capital loss, is subjected to no corporate tax; and

3. To the extent that "ordinary" dividends distributed are less than 90 per cent of net income for the taxable year, or "capital gain" dividends do not equal the net excess above referred to, the balances will be taxable as if the investment company were an ordinary corporation; and

4. "Capital gain" dividends may be treated by the shareholder as a gain from the sale or exchange of a capital asset held for more than six months. However,

5. Once a regulated investment company has made its election to be taxed under Supplement Q, its distributions to shareholders in that and all subsequent years will be taxable to them as dividends to the extent of net income of the company during the year rather than as returns of capital, regardless of capital losses or other items not deductible in computing net income.

The result of these provisions is to render of considerable importance the decision which investment company management must make as to the method of taxation it will elect. Under certain circumstances, for example, if an investment company has accumulated a sufficient excess of capital losses, it will probably be more advantageous to its shareholders if the company elects to be taxed as an ordinary corporation, thus allowing all its dividends to its shareholders to be tax-free in their hands, though applicable as a reduction of the cost or other basis of their shares. Accordingly, there will occasionally be some tax advantages incident to the ownership of investment company shares so long as present tax regulations are substantially unchanged.

Excess profits tax is not levied under the 1942 Act on regulated investment companies, regardless of whether or not they have elected to be taxed under Supplement Q.

THE INVESTMENT COMPANY ACT OF 1940

As earlier stated, the Investment Company Act of 1940 was the outgrowth of a study by the SEC under authority of the Public Utility

Holding Company Act of 1935, it having been the opinion of the Commission that this special legislation was needed to cover phases of investment company operation not thought to be covered by the provisions of other federal securities legislation previously enacted. Thus, both regulatory legislation and tax legislation used with regulatory intent were applied between 1933 and 1942 for the purpose of insuring that the interests of the public as investment company shareholders should be protected. In general it may be said that this was done not solely because the SEC report and investigation uncovered instances of abuses, but also because of the large economic importance of the investment company industry. Many of the provisions of the various charters, declarations of trust, and so forth, briefly summarized earlier in this text have either been amended to conform to the standards set up in the Investment Company Act and the regulations thereunder, or are implicitly modified by the Act and regulations. Every student of investment company securities and every investment banker who handles them ought to study very carefully the provisions of the Act.

The provisions of the Act are directed on the one hand toward elimination or at least restriction of any control which might be exercised by investment companies over other companies and over industry in general, and on the other toward improvement in various operating matters, with particular attention to investment influences such as relations with brokers, investment bankers, and banks, dealing with insiders, restrictions on investments, and so forth. Also, the blue-sky statutes and regulations of several states now contain special provisions regarding investment companies. In addition, the National Association of Securities Commissioners in 1939 set forth certain standards of practice to which many if not all of the mutual investment funds have acceded.

Some of the more important protective provisions of the Act are summarized herewith. The companies must announce their policies with regard to specified matters, such as borrowing money, underwriting, concentration of investments, and so forth, and substantial changes in policy must be submitted to holders of shares or certificates.

Since investment advisers are also regulated by an Act passed concurrently with the Investment Company Act, the latter Act has special provisions concerning the assignment of investment adviser contracts existing with investment companies, their approval by majority of outstanding voting securities of the company, the term for which they may continue in effect, and so forth. In addition, along with other regulations limiting the percentage of the directors or trustees of an investment company who may be affiliated with brokers, investment bankers, and banks, the Act provides similar limitations with respect to investment advisers.

Both management contracts and contracts with general distributors or sponsors are limited in the same way as those with investment advisers.

As to pricing of shares in the cases of open-end companies, the Investment Company Act authorizes national securities associations set up under the provisions of the Securities Exchange Act to make enforceable rules on the subject. These rules have been set up and are intended to avoid or eliminate dilution of the value of outstanding shares or any other results which might be unfair or injurious to holders, including such as might result from unreasonable sales loads or premiums.

An important series of provisions in the Act has to do with the practice known in trust law as *self-dealing*. The Act lays down the general rule that no *insider* acting as principal may knowingly sell or buy any security or other property to or from the investment company with which he is connected or affiliated. *Insiders* would include directors, officers, trustees, and so forth, or promoters of or a principal underwriter for a company, or an affiliated person of any of the above. Prohibition does not extend to purchases and sales of the shares of the fund itself at the regulated prices, nor to transactions handled as agent, provided compensation as broker, and so forth, is the usual and customary commission. Restrictions also apply to purchase of securities from an underwriting syndicate if any of the principal underwriters is an *insider*.

There are also important limitations as to the payment of dividends, the most notable of which states that dividends may not be paid without adequate written disclosure of the sources of payment accompanying the payment. This is to prevent a distribution of capital or trading profits under the guise of investment income.

Bookkeeping and accounting procedures are regulated in detail, together with requirements as to information furnished shareholders. In the case of the open-end companies the SEC must be furnished with copies of all communications to security holders which contain financial statements, and, in addition, each company and every underwriter for such a company must file with the SEC copies of all sales literature within 10 days after first making use of it in connection with a public offering. Semi-annual reports to stockholders are required, including information on compensation paid to trustees, officers and directors. The Act contains provisions with regard to the selection of accountants, and prescribes rules for the type of accounts, books and other records to be kept by the fund.

Since the SEC believed that the open-end companies would, on account of the continuous offering of their shares, be restricted to the maintenance of portfolios of relatively well-known marketable securities, the Act contains with respect to these companies limitations upon the amount of underwriting of new issues of securities which may be carried on. Other

matters restricted include loans and borrowings. In addition, the Act empowers the Commission to make rules with respect to margin accounts, joint accounts, short sales and such matters, though few investment companies have charters or declarations of trusts permitting such practices.

The Investment Company Act affects practically all investment companies, closed-end as well as open-end, and diversified as well as non-diversified, though certain exemptions are stated. While registration under the Act is in one sense permissive, Section 7 of the Act so severely limits the activities of unregistered companies that registration is well-nigh compulsory. Section 7 forbids to an unregistered company the use of the mails or "any means or instrumentality of interstate commerce" to engage in any business in interstate commerce, including the purchase, sale, redemption or retirement of any securities, whether or not the company itself is the issuer thereof. Companies qualified under the Act are known as *registered investment companies*.

With respect to registered closed-end companies the Act provides detailed restrictions upon the issuance of any senior securities, whether in the form of indebtedness or stock, and there are similar limitations provided for with regard to open-end companies.

INVESTMENT POLICIES AND PRACTICES

It may safely be said that investment companies, whether common stock funds, balanced funds, or specialty funds, have the same general objectives as any investor; that is, to secure with due regard for the purposes in view the best available combination of safety, reasonable income, marketability, and potential appreciation. Within this frame of reference, however, many variations are possible, though many of the apparent differences in policies appear in the end largely as matters of emphasis or degree rather than as true differences in ultimate objective. This is true because in the main the investment companies are primarily investment and not speculative media, and as such are addressed to the investment preferences of the public as a whole. So far as the management of the companies is concerned, no derogatory implication is intended. The managements wish to provide a vehicle for investment savings which will be safe, productive, and marketable, and this, indeed, is the kind of a vehicle which the bona fide, intelligent investor desires. The investor should not expect and management cannot provide the ideal investment program. There is just so much to be had in the investment pie: a large slice of appreciation means smaller slices of safety, or income, or marketability, or perhaps of all three. There is a price on overemphasis in any direction.

Investment companies may be classified in three different ways from the

standpoint of their practices and policies: first in accordance with the composition of their portfolios, next in accordance with their investment objectives, and, finally, by the approaches they select to the problem of attaining satisfactory investment performance.

COMPOSITION OF PORTFOLIOS

The common stock companies operate portfolios consisting predominantly of common stocks, and the bond companies restrict themselves to bond investments. The balanced fund companies, increasingly important in recent years, have portfolios consisting of common and preferred stocks and bonds, the *balance* or proportion as between the three varying from time to time. Further, there is one class of *specialty* company (usually in the open-end field) whose portfolios are limited to the securities of one industry, or of not more than two or three industries. Likewise, in the open-end field there is another type of specialty company which, under one management, offers various packages or groups, each of which constitutes a diversified portfolio in a certain industry or in a certain class of securities selected on the basis of quality. Thus, there are available *groups* or *series* of tobacco, steel, machinery, utility, and so forth, shares, and of high-grade bonds, *income* preferred stocks, speculative common shares, and the like.

INVESTMENT OBJECTIVES

Looking at the companies from the standpoint of their investment objectives, it will be found that the actual composition of the portfolio is often not as important as the intention and skill with which it is managed. Some companies are operated primarily to achieve principal appreciation through market trading, and some gain the same end through careful selection of investments in companies appearing to have *growth* characteristics. Still others seek principal appreciation through selection of *special situations*, often in companies whose securities have a restricted market, with the purpose of participating in the management of such companies over a period of time, and later replacing the commitments with new ones as appreciation is realized. Then there are companies whose sole aim is to provide better-than-average income, and those (mostly of the bond fund class) whose purpose is to provide through diversification better-than-average safety of principal and stability of income. Finally, the middle-of-the-road result is sought by many companies, generally in the balanced fund class.

SATISFACTORY INVESTMENT PERFORMANCE

A study of the portfolio histories of the companies will show that, regardless of the fact that emphasis upon principal appreciation varies

greatly from company to company, all companies are bound to pay attention to conservation of principal, and hence must take account not only of the quality of the investments they purchase, but also of the financial markets, including the levels and trends of bonds as well as of stocks. The degree to which managements attempt to adjust portfolios to market conditions varies considerably, but at least five approaches to the problem of attaining satisfactory investment performance may be listed. First is the cyclical trading approach—an endeavor to get in at the bottom and out at the top, with the important qualification that few, if any, companies would ever attempt either to be fully invested or to have all assets in cash at any one time. The more frequent policy is the second, that of varying the cash or liquid position from time to time in accordance with the estimated future course of the markets. Third comes a more conservative variation, in which, instead of making shifts in proportions of cash alone, they are made also in the proportions as between equity and nonequity holdings. The fourth category includes those companies which, while not neglecting the state of the market, place major reliance upon the very close supervision of a relatively small portfolio list. Finally, there are those companies seeking appreciation less in the market in general than through the selection of *growth* investments, or investments undervalued either on a price or an income-yield basis.

It must be recognized that the classifications given in the three preceding paragraphs are only approximations, and particularly that the classifications of necessity tend to overlap. Just as, for example, no company would place principal appreciation so high as an objective as to neglect income altogether, no company, likewise, would do the reverse. The successful search for undervalued securities often results in good income as well as satisfactory appreciation, and appreciation, too, often arrives as a result of the selection of securities yielding above-the-average income when such income at the same time is soundly based on the operations of a well-managed company.

DIVERSIFICATION

The methods by which the companies put into effect these general policies are those of continuous research and diversification of investments. Even the companies classed under the Investment Company Act as nondiversified do actually practice diversification, in spite of heavy concentrations in individual portfolio securities. So far as most individual investors are concerned, and even with respect to some institutional investors, it is precisely the combination of expert research and continuously supervised diversification which is difficult to obtain except through some such device as the investment company. The art of investment management cannot

safely be practiced on a spare-time basis. The contribution which the investment companies make to the solution of investment management problems justifies their existence and explains, particularly, their rapid growth in the period since 1932.

The investment companies are of course not alone in laying emphasis on diversification as one of the most important investment principles; texts and periodical literature on investments are full of the testimony of both academic and practical experts as to the vital importance of diversification. While diversification is sometimes spoken of as an investment objective, it is really more proper to speak of it as a policy or a means toward the attainment of other investment objectives. The principle is the same as that expressed in the perhaps too often repeated adage about not putting all your eggs in one basket.

More specifically the underlying theory includes the principles of reduction of risks by combination and of reduction by compensation, or offsetting. The general principle is perhaps most commonly known as that underlying all forms of insurance. The principle is practiced by institutional investors of all kinds, such as insurance companies, banks, endowed institutions, trustees, and so forth; in fact, in many states diversification of investments by trustees is recognized as a duty by force of judicial decisions, or by actual statute. The approval which the principle of investment diversification receives rests on a combination of mathematical and business reasons. The mathematical law of probabilities expresses by formula a classification of equally probable events, as, for example, in predicting the number of *heads* and *tails* likely to result from a given number of tosses of a coin. Business hazards are such that no equally valid mathematical formula of prediction can be arrived at, but there are sufficient regularities in business statistics and financial ratios to permit their use as bases for determining the more probable course of events. In diversifying its portfolio, what the investment company does is to add to the protection afforded by mere numerical diversification the investment judgment of its management based on research.

One of the chief differences between the British and American investment companies has been that the former rely much more heavily on diversification than on research. A British company may often have from 200 to 900 portfolio items as compared with the ordinary range in the United States of from 50 to 150. Diversification in American company portfolios, nevertheless, can certainly be deemed adequate. Aside from diversification as between stocks and bonds, use is made of diversification by companies or issuers, by geographical locations, by maturities of bonds, and as between *defensive* industries (food, tobacco, and so forth) and *offensive* or cyclical industries (as steel and machinery).

Preferences vary from time to time in a given company, according to market conditions, and at all times they vary as between different companies. While most of a list of some 50 or 60 well-known common stocks are to be found in the portfolios of most investment companies, beyond these the choice widens rapidly. Moreover, it frequently happens that the same stock is being heavily purchased and heavily sold by different investment companies at the same time. By study of portfolio histories the investor may determine the type of company best suited to his needs. But whatever company he selects, he is almost certain to secure a far wider degree of diversification than he could get in any other way. Taking the 1940 year-end statements of four well-known investment companies, the figures below indicate the number of dollars per \$1,000 of net assets represented by the largest commitment (government bonds excluded) in each portfolio:

Selected Industries, Incorporated	\$56.60
Fundamental Investors, Incorporated	21.00
Massachusetts Investors Trust	32.00
The Lehman Corporation	35.38

MEASURING INVESTMENT PERFORMANCE

The most difficult task in appraising investment company securities is to find a standard of comparison which will be at once equitable and convenient. Whatever measurement of investment performance is attempted must be made in the light of the policies and objectives of the companies studied. The objectives of investors differ, and what is good performance to one may be poor to another. The characteristics of bonds and stocks vary; so do those of industries, and no investment student would expect, for example, the same investment performance from a commitment in shares of a chain grocery company as he would from a purchase of shares of a copper company. While the public speaks of investment companies as a class, we have already seen that there are wide variations within the group as to structure, investment philosophy, and day-to-day policies. Thus, comparison of the common shares or certificates of two companies, each having only the one class of capitalization outstanding, might at any time show little real difference in net asset value per dollar market value of common, in net earnings per share, and even in net appreciation per share per annum. Yet, in view of what each of the two managements was trying to accomplish, one result might well be considered a poor performance and the other a good one. In short, typical statistical analysis, such as is applied in other investment fields, is of little use here, since what is being weighed in this field is the imponderable, that is, the value of management operating a portfolio in highly sensitive financial markets.

COSTS

Before turning to a consideration of the end results of investment policies and practices, consideration must be given to costs, although, in general, costs do not appear to have as much effect upon investment performance as they do upon performance in other fields of industry.

One of the objections most frequently advanced to the use of investment company shares is that there are two *extra costs* involved. The first is the *extra* cost of management of the portfolio and operation of the company, and the second is the *extra* cost of obtaining the shares of the company itself.

It is true, of course, that the investment company as a business entity is subject to certain expenses to which a privately owned fund of the same constitution is not. This amount of additional expense, to be justified, must be offset by superior performance, and in reaching this performance the company management must not assume any greater investment risk than is proper within the limitations of its own investment objectives. There is a wide range in the total expenses of investment companies, whether computed on the income or on the assets of the company. The interesting thing, however, is that the arrangement of a list of investment companies in the order of their investment performance in any given year does not insure a corresponding order with respect to expense ratios, whether figured on income or on assets.

This writer made a comparison of this sort as between twelve well-known open-end companies, chosen at random, for the year 1941. The comparison showed that the company with the lowest expense-assets ratio had the best over-all performance, but the company with the lowest expense-income ratio had only the tenth-best over-all performance. Further, the second-best over-all performance was registered by the company with the ninth-best expense ratio with regard to income, and the sixth-best with regard to assets. Moreover, expense-assets ratios and performance were computed again for the year 1944 as to the same twelve companies, at which time relative positions as to performance and expense-assets ratios had changed. Such disparities are, of course, the result of the different objectives of the companies in question, the accidents of market fluctuations, the success or failure of a given policy at a given time.

As to actual expense ratios, it is probable that the range of expense in relation to investment income is somewhere between a low of 7 per cent and a high of 25 per cent, and that with relation to average net assets administered, from a low of 0.35 per cent to a high of 1.50 per cent, though these figures are admittedly not comprehensive.

Without regard to the actual cost of acquiring shares the other, or

management costs, are of real importance only with respect to results. The question really is as to whether the costs seriously dilute investment performance, or indeed dilute them at all. This question will be discussed at a later point. If the theory of pooled investment under professional management is sound, then the purchaser of investment company shares gets something in return for any extra cost with which he is charged. The investment companies have to justify themselves by giving the investor superior performance and greater diversification, after these expenses, than he could otherwise command with resources available.

COSTS OF ACQUIRING AND SELLING SHARES PERFORMANCE

Costs of acquisition of shares and costs of sale may be additional costs to a certain extent, but surely not to the extent usually supposed by the public. The closed-end company share, of course, is bought and sold either on the exchanges or in the over-the-counter market, just as is the case with respect to any other share. The market price of the share is determined to some extent by the net asset value of the portfolio, as well as by prospects for the company itself, but obviously cannot represent a mathematical pro rata of the net asset value since there is no contract between the company and the shareholder fixing such a relation. There have been occasions in the past when closed-end company shares sold at substantial premiums above their net asset or break-up value. At the present time, however, most of them tend to sell at some discount from such value. Study of the price history of closed-end company shares indicates that these discounts tend to vary with the market; that is, the discount narrows in a rising market and widens in a falling one. Purchase of the shares in a low market and sale in a high one therefore would capture a large part of this discount and constitute an extra advantage to the purchaser of the share of a closed-end company.

As to the shares of the open-end companies, the *load* or *premium* charged at the time of purchase appears substantial in amount. However, it must be remembered that spread or load constitutes both the buying *and* the selling charge, since purchasers are entitled to demand redemption at approximate net asset value without additional charge for such redemption. It can be said, in the first place, that the spread of something like $7\frac{1}{2}$ per cent, which appears currently to be about the average, is probably no larger than the spread between the bid and asked prices on a great many unlisted securities. (Open-end company shares are almost without exception unlisted.) As all traders know, security buyers tend to pay the asked price and security sellers tend to receive the bid price, so that the spread on open-end company shares is quite in line with ordinary financial practice.

There is, however, a more important consideration, and this has to do with the method by which the companies establish the net asset value of their shares, upon which the retail offering price is based. In almost all cases open-end companies compute net asset values of their portfolios upon the *last sale price* of each portfolio item or, in default of an actual sale, at a mean between the bid and asked prices. These net asset value prices are determined twice a day and, besides, are computed without allowance for brokerage, odd-lot commissions, taxes, and so forth. In other words, the total fund represented by the assets of the company is valued at less than it would cost to reproduce it, so that the purchaser of a share in the fund, though he does pay a premium over what he would receive if he immediately resold his share, does not pay as large an additional cost over the reproduction cost of his share of the portfolio as might otherwise appear.

Many investors, also, do not realize the extent of the cost of acquiring a diversified portfolio, particularly if it has to be done in small lots. This writer computed the buying and selling commissions and taxes involved in a simultaneous purchase and sale of one share of each of the thirty Dow-Jones Industrial Average stocks as of April 10, 1943. At that time the principal cost of the thirty shares would have been \$2,043.78, but the charges would have been \$225.60, resulting in an over-all cost of 11.04 per cent "to turn around." It is clear that for an investor with a small amount of money to invest the purchase of open-end company shares is cheaper than an attempt to do his own diversification. Round-lot trading costs less per dollar invested, but there are very few investors, even in this class, who could duplicate the range of diversification obtained by the investment companies. In addition, the open-end companies as a rule have a declining scale of premiums applying to large purchases, in some cases going as low as 1 per cent. At this level, purchase of a diversified portfolio through the medium of an investment company is probably just as cheap as it would be on a round-lot basis on the exchange.

PERFORMANCE

It has been said, and perhaps with some justice, that the least the management of a common stock investment company should do is to do as well as the market average. This is said on the theory that the *company* can afford to *buy the averages* themselves, and in any case to buy diversification at least as wide as that of the averages, whether or not the individual or institutional investor may in all cases be able to do either. The argument has a certain amount of validity, but it overlooks the fact that the market averages, such as Dow-Jones, and Standard and Poor's, are not the average of the whole market, and also that they are themselves

managed in one sense of the word; that is, they have to be adjusted from time to time by additions and eliminations to represent more accurately current market activity and leadership. Too, while the market averages may represent a certain quality of performance, they do not necessarily represent the ideal investment program in common stocks. In spite of its selectivity, moreover, the well-known Dow-Jones 30-Stock Industrial Average does not always do as well as the market as a whole. For example, from the end of April, 1942, through the end of February, 1943, the industrial average had gained 36.4 per cent, compared with a 44.3 per cent increase in the total market value of all listed industrial stocks. This happens to have been a reflection of the public interest in speculative, low-priced stocks.

The various stock and bond averages are of course useful as rough yardsticks of performance, since one would scarcely wish to keep as a permanent investment the shares of an investment company which consistently fell below what are, after all, accepted as reliable indicators of the performance of the market as a whole. Some care needs to be taken in selecting stock market averages for comparisons, however. For example, the Dow-Jones Composite Average is clearly a better standard than the Dow-Jones Industrial Average for comparison with an investment company of the common stock type containing substantial commitments in rail and utility as well as in industrial shares. The Standard and Poor's 90-Stock Index is probably even better for such a comparison than the Dow-Jones Composite, since it represents a better weighting in relation to the market as a whole.

It is obviously very difficult to construct any sort of a standard for the measurement of results of balanced funds and specialty companies. In the case of a balanced fund, it would be necessary to construct market averages of the types of investments held by the fund, and then to compare the performance of the fund to these averages after adjustments made so as to reflect the percentages of each type of investment held. In the case of some specialty funds, such as Century Shares Trust, which specializes in bank and insurance stocks, and Manhattan Bond Fund, there are published averages which might (with some study) be used on a comparable basis. Likewise, *Barron's* industry group averages can be used to some extent as a basis of comparison for specialty *packages*, such as Chemical Fund, Inc., the oil, aviation, steel, and so forth, groups of New York Stocks, or of Group Securities, Inc., and *Barron's* quality group averages could in some cases be roughly compared to the different qualities of funds offered both by Keystone Custodian Funds and by National Securities Series.

The most generally used measurement of investment performance of

investment company shares is one in which both appreciation and income over a given period are combined, the result being a percentage *performance relative* which expresses the advantage gained in both principal and income.

The potential purchaser can compute his own performance, as against that of an investment company, as shown below, allowing for both appreciation or depreciation in capital employed, and also for income received.

An individual's portfolio:

Value of securities today	\$10,500.00
Interest received and/or dividends accrued to stock of record during the period under study	400.00
	<hr/>
	\$10,900.00
Deduct, value at start of period	10,000.00
Gain in net asset value	\$ 900.00
$\$900.00/\$10,000.00 = 9\%$, performance relative; that is, percentage gain in net assets plus interest and/or dividends for the period.	

State Street Investment Corporation:

Asset value per share	12/31/45	\$53.90
Plus 1945 dividends		6.60
		<hr/>
		\$60.50
Asset value per share	12/31/44	44.96
		<hr/>
		\$15.54

$\$15.54/\$44.96 = 34.52\%$, performance relative.

The same method is used in computing performance of the stock *averages*, adjusting for dividends paid, and so on.

Several notes of caution must be sounded.

1. The period selected for comparison of one company with another, or with one of the stock market averages, should not be too short. One year, for example, affords no test of investment management, as may be seen below.

	<i>Performance Relatives</i>		<i>Ten Years</i>
	<i>1937</i>	<i>1944</i>	<i>1936-45</i>
	<hr/>	<hr/>	<hr/>
Lehman Corporation	- 31	+ 32	+ 130
National Bond and Share	- 19	+ 22	+ 95
Dow-Jones Composite	- 33	+ 25	+ 123

2. Performance comparisons limited to the period of one bull market or one bear market can be very misleading, unless the companies compared are truly comparable as to objectives and policies. For example:

	<i>Bear Market</i> <i>1930-32</i>	<i>Bull Market</i> <i>1933-36</i>
Scudder Stevens & Clark Fund (a balanced fund)	- 34.6	+ 117.2
Incorporated Investors (an "appreciation" common stock fund)	- 62.4	+ 180.5

3. Since the performance of investment company shares, as indicated above, is affected by action of the markets, the only way in which the market averages may fairly be used as a standard of comparison is by selection of a period during which they began and ended at virtually the same levels. Thus, with any substantial change in market value of the averages eliminated, if the investment company shows an appreciation in net asset value for the same period, that is an indication of the worth of its management. The averages and the investment company shares are both adjusted, of course, to reflect dividends. Examples of figures from a so-called "ideal" period follow: Standard & Poor's 90-Stock Index was virtually unchanged at beginning and end of period: 136.4 *vs.* 137.8, 1937-1945 inclusive.

Standard & Poor's 90-Stock Index	+ 59
Open-end companies:	
Affiliated Fund	+ 25
Investors Fund C	+ 69
Fundamental Investors	+ 111
Closed-end companies (leverage):	
Niagara Share Corporation	+ 20
Chicago Corporation	+ 79
Overseas Securities	+ 144
Closed-end companies (nonleverage):	
Shawmut Association	+ 54
Consolidated Investment Trust	+ 136
Tobacco & Allied	+ 153
Average, 29 open-end common stock companies	+ 62
Average, 32 closed-end companies (leverage)	+ 69
Average, 6 closed-end companies (nonleverage)	+ 80

Another somewhat similar period was from December 31, 1946, to March 31, 1947, the Dow-Jones 65-Stock Composite Average standing at 64.70 at the beginning of the period and at 68.51 at the end. Sample performance relatives follow, including adjustment for dividends:

Dow-Jones Composite Average	+ 30.0
22 Open-end common stock funds:	+ 25.2
National Investors Corporation	+ 73.2
Massachusetts Investors Trust	+ 21.7
State Street Investment Corporation	+ 32.9
11 Open-end balanced funds:	+ 31.1
Eaton & Howard Balanced Fund	+ 48.6
Wellington Fund, Inc.	+ 35.6
General Investors Trust	+ 23.4

While this type of investment performance calculation is not unimportant and is not to be lightly regarded, it is worth while repeating again that an individual's investment plan, or the merchandising policy of an investment banking house which is too much influenced by changing performance results of the investment companies, is not likely to be very successful. It cannot be too often repeated that the principal problem in the selection of investment company shares is that of discovering a company whose investment objectives fit those of the account for which the shares are being purchased.

LEVERAGE IN INVESTMENT COMPANY STOCKS

Leverage is simply the effect of borrowed money, and the so-called leverage investment company stocks are those with a considerable weight of preferred stock and bonded debt ahead of them. Such shares, of course, are more volatile than those of single-class capitalization companies, since both asset coverage and income available fluctuate more widely. A clear understanding of the general principles underlying leverage is of considerable assistance in selecting for speculatively minded investors the most promising situations. (Table 24 illustrates the principles involved in figuring leverage in general.)

TABLE 24

	<i>Company X</i>	<i>Company Y</i>
A. Total assets:	\$40,000,000	\$40,000,000
Represented by:		
Preferred stock	\$30,000,000	\$15,000,000
Common stock equity	\$10,000,000	\$25,000,000
Common stock outstanding (shares)	5,000,000	12,500,000
Common stock asset value	\$2.00	\$2.00
Working assets per common share	\$8.00	\$2.50
B. After 75% rise in total assets		
Total assets:	\$70,000,000	\$70,000,000
Represented by:		
Preferred stock	\$30,000,000	\$15,000,000
Common stock equity	\$40,000,000	\$55,000,000
Common stock outstanding (shares)	5,000,000	12,500,000
Common stock asset value	\$8.00	\$4.40
% increase in value of common	300%	120%

From the above it is clear that two things are of particular importance, first, the amount of senior capital ahead of the common shares, and, second, the number of common shares outstanding in comparison to the equity available for the shares. Thus, in the table as shown, the common stock asset value of the shares of Company X and Company Y is identical. Nevertheless, after a 75 per cent rise in total assets, the asset value per share of Company Y common stock has increased only 120 per cent, while that of Company X has increased 300 per cent.

Of course, the same factors which make for rapid increase in a rising market make for an equally rapid decrease in a falling one. Moreover—and this is a point to be noted in connection with appraisal of the preferred shares of investment companies—a 75 per cent decrease in assets in the two cases noted above would leave the preferred shares of Company X in much worse condition than the preferred shares of Company Y.

In many respects the common shares of leverage investment companies are similar to a margin account. Company X, above, is like a 25 per cent margin account; that is, a decline of 25 per cent in total assets would wipe out the common stock equity. However, the investment company leverage share enjoys one particular advantage over a margin account, and that is that while the asset value of the share may be wiped out, it still represents a “call” or option on the possible future recovery of asset value. Accordingly, many leverage investment company shares outstanding have at frequent times no asset value whatever, as is also the case with respect to outstanding options and warrants of many companies which give the purchaser the privilege of buying the common shares at a fixed price or prices.

There are many refinements in the study of leverage shares which space does not permit of treating here. However, several points should be mentioned by way of caution, since they must also be taken into consideration in accurate computations. For example, so long as senior capitalization is unchanged, the leverage for common shares tends to increase as the market falls and to decrease as it rises. In addition, the composition of the company's portfolio must be studied to discover the possible effect of any substantial holdings of other leverage issues, together with the general volatility or nonvolatility of the portfolio itself. And the discount or premium with relation to asset value at which the particular shares might currently be selling is also of importance. Portfolio volatility is of special importance, since the principal interest in leverage common shares is for the purpose of taking advantage of potentially more rapid market appreciation.

INVESTMENT COMPANY SENIOR SECURITIES

For the obvious reason that portfolios of investments tend to fluctuate rather widely in value, the use of preferred stocks and of bonds or debentures by investment companies as sources of capital is restricted, and somewhat more so than it once was.

There is only a handful of investment company bonds outstanding, and these are characterized by very high asset coverage per dollar outstanding, somewhere in the range of 300 to 1,000 per cent, and also by prices in excess of any existing redemption price. In the past few years low

interest rates prevailing have made it possible for the companies to retire most of their outstanding debentures, or to refund them at lower interest rates. Even in the worst markets of the past twenty years investment company bonds retained perhaps a larger degree of asset protection than was the case in many other industries and afforded rather outstanding opportunities for astute investors.

Somewhat the same considerations apply with respect to preferred stocks of the investment companies, although as to these there is a much wider range of choice available, and a much wider range of quality. There are about 21 actively traded investment company preferred stocks outstanding, with yields in the range of from 4 to 6½ per cent at 1946 year-end markets. Asset values range from actual deficiencies to asset coverage of as much as seven to one. Many of the issues are convertible.

Since enactment of the Investment Company Act of 1940, it has not been possible for open-end companies to issue senior securities. As a result, with the exception of Affiliated Fund, whose small issue of debentures was originally sold before the Act was passed, open-end companies have no senior securities; these are to be found only among the closed-end companies.

FIDUCIARIES AS PURCHASERS OF INVESTMENT COMPANY SHARES

Up to this point investors have been treated as a general class with respect to investment company shares as possible outlets for their funds. It has been indicated that the investment banker can find among investment company securities types to fit the needs of all types of investors. However, in view of the substantial importance of trustees and other fiduciaries as purchasers of investment securities of all kinds, it is proper to sound here a note of caution with respect to purchases of investment company securities by the fiduciary investor.

The trustee as an investor is hedged around with many more restrictions when it comes to buying and selling securities than is the case with the ordinary investor. It may safely be said, for example, that the trustee cannot afford to take it for granted that he has the power to purchase investment company securities, unless the trust instrument under which he is operating or the statutes of the state in which his institution is located specifically give him permission to do so.

Two of the large number of states which adhere to the *legal list* or *legal standard* rule of trust investment have statutes permitting trustees under certain circumstances to purchase investment company securities. These states are Oregon and Nebraska. In most of the states, however, trust investments are, in general, limited to strictly defined types of

bonds and mortgages, and the purchase of common stocks is not allowed; this is subject, as above, to the terms of the individual trust instrument which may free the trustee from the limitation of the statute.

In the so-called *Massachusetts rule* states, where the standard for trustee investment is the discretion of the *prudent man*, no list of approved securities is maintained by the state, and trustees are, in effect, free to buy whatever they can prove to be in conformity with the practice of men of prudence, intelligence, and discretion buying for the permanent disposition of their own funds, with due regard both to the probable safety as well as the probable income of the capital to be invested. It has not been possible as yet, however, to find actual authority in the *Massachusetts rule* as variously interpreted in the various states for a trustee to purchase investment company securities.

The ordinary objection to a trustee's purchase of investment company securities is that he thereby delegates a duty which he may reasonably be expected to perform himself. It goes without saying that one of the fundamental duties of a trustee is to invest the funds of his trust, and the attack proceeds on the lines that when he purchases shares in an investment company, he turns over to others the task of selecting the investments which will form the corpus of his trust.

Without elaborating on this point, there are some indications that a trend toward eventual judicial or statutory approval of trustee purchase of investment company shares may be under way. As an examination of the annual statements of many of the investment companies will show, it is a fact that trustees, executors, administrators, and other fiduciaries have purchased and do hold investment company securities, and the same can be said of other fiduciary types of investors, such as schools, hospitals, churches, and so forth. The past history of the law of trusts has been that it accommodates itself, though often slowly, to changing business conditions and changed investment practices. In the meantime, the investment banker who contemplates offering investment company securities to a fiduciary had best be sure of his ground. If the purchase may be made with legal propriety, it will often be found that it is a distinct aid to the fiduciary, especially in the case of small trusts.

CONCLUSIONS

The investment company has established itself as an important factor in the financial life of the nation. Its particular value is that it provides investment management on a scale of availability impossible without the use of some such device, and hence helps to direct the stream of investment savings in an intelligent fashion.

So far as the investment banker is concerned, the investment company

as an institution provides both a valuable outlet for securities and, in itself, a profitable piece of merchandise for sale.

As an investment, the investment company security, whether bond, preferred stock, or common share, will stand comparison in its particular quality class with other investments, and, in addition, will afford to the purchaser an extra measure of protection, both by reason of the diversification of the company's portfolio, and by reason of the special, governmental regulatory and legislative protections which have been thrown around it.

Growth in the industry during the past fifteen years has been rapid, and there is as yet no evidence that the rate of growth is slowing appreciably. The investment company is a flexible instrument which can be adapted to many types of financial enterprise. For example, the Securities and Exchange Commission in its original investigation expressed the opinion that the investment companies should direct their attention to the financing of "venture" enterprises, those which might find it difficult to attract sufficient capital from individual contributions of investors. Special provision was made in the Investment Company Act of 1940 for the formation of just such companies. The American Research and Development Corporation, the first company of this type, appeared in 1946. By special order, the Commission permitted individual investors to participate in the formation of this company, along with six investment companies, two life insurance companies, and four universities. The purpose of the corporation is "to provide and encourage research and to aid in the development of small new businesses into companies of stature and importance." The corporation initially secured a substantial amount of capital and provided itself with a scientific staff of competence.

Such developments, together with the record of the orthodox investment companies themselves, provide evidence of the maturity of the investment company business.²

REVIEW QUESTIONS

1. Define "investment company."

² This chapter contains a considerable amount of material either paraphrased or taken directly from the author's work, *Shares in Mutual Investment Funds*, published in 1946 by the Vanderbilt University Press, Nashville, Tennessee. The Press, owner of the copyright, has given permission for the use of this material.

Acknowledgment is also made that some of the "performance relative" figures used in the text and an adaptation of a table explaining leverage (but not any of the text itself) were taken from the 1946 edition of *Investment Companies*, published by Arthur Wiesenberger & Company, New York; other figures were taken from various articles appearing from time to time in *Barron's*, *The National Financial & Business Weekly*.

2. What is the difference between an investment trust and an investment company?
3. What is the primary purpose of investment management?
4. What is the common characteristic of investment institutions?
5. What is their importance to the field of investment banking?
6. What are the two tendencies characteristic of British investment companies which are not ordinarily characteristic of American trusts?
7. Distinguish between "fixed" and "management" trusts.
8. Distinguish between "open-end" and "closed-end" management trusts on the following points:
 - (a) Offering of shares.
 - (b) Redemption of shares.
 - (c) Relation of asset value of shares to market value.
 - (d) Capitalization.
9. When did the big era of investment trust business commence in the United States?
10. What is the weakness of the "fixed" trust?
11. State in detail the method of arriving at the retail offering price of shares of an "open-end" trust.
12. State the functions and duties of the "sponsor."
13. What is the purpose of using an independent financial institution as custodian of trust's assets?
14. In what two ways may investment bankers profit through relations with trusts?
15. What is the reason for the preferential treatment accorded investment trusts under certain provisions of the Federal Revenue Acts since 1942?
16. What federal legislation controls the activities of registered investment trusts?
17. What requirements must an investment trust meet to qualify as a "regulated investment company"?
18. State briefly the main features and aims of the Investment Company Act of 1940.
19. What are the investment objectives of investment trusts in general?
20. State the three methods employed to obtain the objective of capital appreciation.
21. Name five approaches to the problem of attaining satisfactory investment performance.
22. Compare the use of the principle of diversification between British and American trusts.
23. Why is it difficult to find an equitable standard for measuring investment performance which will be applicable to all trusts?
24. What are the two "extra" costs involved in the purchase by an investor of trust shares?
25. What are the two methods used to show relative operating and distributing costs of trusts? Which one, in your opinion, is the superior, and why?
26. What are the arguments used to justify the load or premium on "open-end" trust shares?
27. What are the deficiencies in using the Dow-Jones Industrial Averages as a criterion of comparison with investment trust performance?

28. What is the generally used method of measuring performance of investment trust shares for comparative purposes?
29. What problem arises in constructing a standard for the measurement of results of balanced funds and specialty investment companies?
30. What is "leverage" and how does it function with respect to investment trust shares?
31. Briefly discuss the problem of fiduciaries investing in trust shares.

INVESTING FOR A COMMERCIAL BANK

*by R. B. Blyth, Vice President,
The National City Bank of Cleveland*

THE MOST IMPORTANT aspect of the investment of the funds of a commercial bank is not the technique used in the actual purchase of securities, but the background of study that is essential before intelligent investment decisions can be made. This chapter will deal largely with the background of the commercial banks' investment problem, although there is no intention to minimize the value of knowledge of the technical side of the market and the use of proper technique in the purchase and sale of securities.

The commercial banking system is one of the important markets for investment securities along with individuals and other institutional investors, such as insurance companies, mutual savings banks, and endowed institutions.

INVESTMENT HOLDINGS OF COMMERCIAL BANKS

The importance of the commercial bank as an investor in securities is perhaps best illustrated by figures (Table 25) which show the ownership of various types of debt by all insured commercial banks, mutual savings banks, and insurance companies.

These figures are not entirely consistent because of different dates, but they show the relative size of the investment holdings of commercial banks, insurance companies, and mutual savings banks. The commercial banking system on June 29, 1946, held 44.7 per cent of the marketable United States government debt held by the public, whereas insurance companies and mutual savings banks together held only 20 per cent at the same date. The commercial banks owned approximately 29 per cent of municipal and state debt, while holdings of mutual savings banks were very nominal, and life insurance companies owned about 5 per cent of this class of security. In the field of corporation bonds the figures available are not satisfactory since some part of the long-term debt of corporations is not marketable and, for example, undoubtedly appears as

bank loans in the commercial banks. As of June 29, 1946, the commercial banks held \$2,414,000,000 of corporate securities as investments. This was only 6.7 per cent of the net long-term corporate debt (excluding mortgages carried as mortgage debt by investors), which totaled \$35,707,000,000 at the end of 1945. All life insurance companies held 29.4 per cent of net corporate debt at the end of 1945, and mutual savings banks held 3 per cent.

TABLE 25
(millions of dollars)

	<i>Marketable U.S. Govt. Debt in hands of Public*</i>	<i>%</i>	<i>Net Debt of State & Local Govts.</i>	<i>%</i>	<i>Net Long-term Corporate Debt, excl. Mortgages</i>	<i>%</i>
	6-30-46		6-30-45		12-31-45	
Total	\$182,808		\$13,725		\$35,707	
Owned by Operating insured Commercial banks	81,803	44.7	3,975	29.0	2,414	6.7
Owned by Mutual savings banks	11,500	6.2	100	—	1,100	3.0
			(12-31-45)		(12-31-45)	
Owned by Insurance companies	25,300	13.8	700†	5.1	10,500†	29.4

* Includes debt owned by Federal Reserve Banks.

† Life insurance companies only.

The importance of the banking system in the markets is, if anything, underemphasized by these figures, since they do not reflect the large turnover of investment that takes place. The commercial banks provide an elastic market for many types of securities, and securities find a temporary resting place in the banking system until they are gradually purchased for permanent investment by other classes of investors.

These preliminary remarks are designed to stress the interrelationships that exist in our economic system. The action of the bond market has its effect on the stock market, although this is not always apparent, and the activities of one investor group affect the thinking and activities of other groups. This should be remembered at all times.

FACTORS AFFECTING INVESTMENT POLICY

There is no rigid investment formula that applies equally to all commercial banks because there are no two commercial banks that are exactly alike. Each bank must formulate its own policy, based on its own circumstances. The officers of a bank charged with the responsibility of investing its funds have a duty to the depositors to see that a reasonable

degree of liquidity is maintained; to the business community that it serves to meet legitimate credit needs; and to the stockholders, within the limits of prudent judgment, to earn a reasonable return on the capital investment.

There is no fundamental conflict in these responsibilities from the stockholders' standpoint since it is vital to the stockholder that the general reputation of the bank be safeguarded, by prompt honoring of deposit withdrawal demands without undue recourse to borrowing, and by a ready granting of legitimate credit needs to the community that is served.

With these responsibilities in mind, various factors more or less common to all banks must be considered. These factors may be enumerated as follows, and will be discussed in detail later on:

1. The character of the money that is being invested.
2. The capital position of the bank.
3. The loan position of the bank and the loaning policy.
4. The earning requirements of the bank.
5. The available supply of suitable investments.
6. The organization available to supervise the investment program.

These factors must be reconciled and from them an investment program developed. Such a program is then activated and frequently reviewed against a background of study of central banking policy, treasury financing requirements, general economic developments; and a constant reappraisal of the risk element in the various types of investments which are owned or are available in the market.

THE CHARACTER OF THE MONEY THAT IS BEING INVESTED

This is a common starting point for all investors—an analysis of the character of money that is being invested. In many ways this job is more complicated for the commercial bank investor than it is for other investors, since the commercial bank handles an exceedingly wide variety of deposit liabilities, some of which might be listed as follows:

1. Demand deposits:
 - a. Individual.
 - b. Corporate.
 - c. Unincorporated business.
 - d. Institutions.
 - e. Trust funds.
 - f. Other funds.

- g. Foreign.
- h. United States government.
- i. State and municipal.
- 2. Time deposits:
 - a. Savings deposits.
 - b. Corporate.
 - c. Public.

As of June 29, 1946, the deposit liabilities in millions of dollars, of all insured commercial banks were divided broadly as follows:

Total deposits	\$140,612
Demand deposits	\$108,389 = 77%
(Inter-bank	11,930)
(U. S. government	12,941)
(State and political subdivisions	5,807)
(Individual and corporations, etc.	75,391)
Time deposits	\$32,222 = 23%

It is not possible, nor is it necessary, to analyze each individual deposit liability and know what plans the depositor has for using the money. The thing that is important is the probable extent of fluctuation in the over-all deposit base, not only from day to day but over longer periods of time. It is also important to understand what broad movements in deposits are taking place as a result of general economic developments and how your particular bank is affected by these developments. Each type of deposit has somewhat different characteristics, and it is possible to understand in a fairly general way the probable trend of deposits, the probable extent of normal fluctuations in deposits, and the possible risks of abnormal deposit change.

While it is obvious from the figures presented that the banking system is primarily concerned with demand deposits, nevertheless, time deposits (largely savings accounts) are extremely important. The time deposit business aggregated roughly 23 per cent of total deposits as of June 30, 1946, and it is worth noting that the savings deposits in commercial banks are roughly double the savings deposits held by the mutual savings bank system of the country.

STABILITY OF DEPOSITS

The greatest stability in deposits is found in the deposits of individuals, partly because there are such a large number of accounts, and a sudden shift in deposits all in the same direction by a large group of individuals is unlikely except in times of unusual stress or panic conditions. This is true not only in the savings accounts but also in demand

deposits of individuals. For a similar reason (the large number of people concerned), a relatively high degree of stability is probably found in the aggregate deposits of smaller businesses, while the ordinary deposit balances of institutions and of financial businesses, such as insurance companies and investment companies, are also reasonably steady.

The greatest relative instability for any particular bank is found in the deposits of large corporations. That is true not only on a day-to-day basis but it is also true that wide variations occur from time to time in these accounts for a variety of reasons. For example, funds are accumulated for tax payments; pay rolls, which may be very substantial, are met periodically; and there may be some established custom of paying bills at certain times of the month. In addition, funds are often accumulated in centrally located banks and transferred from time to time to localities where manufacturing operations are conducted. Capital expansion programs of business necessitate the accumulation of unusual amounts of money, sometimes through the public sale of securities. In connection with refunding operations or outright redemption of publicly owned securities, funds must be accumulated temporarily and deposited with trustees or paying agents. In addition, there is an extremely high degree of competition for deposits of large corporations, and, as a result, changes in banking relationships are constantly taking place which bring important changes in relative deposit positions over a period of time.

Some special mention should be given to interbank deposits, which aggregated \$11,930,000,000 at the end of June, 1946. To a limited extent these deposits represent the required reserves of nonmember banks, but for the most part they represent deposits that one bank carries in another bank for business reasons. Banks in Reserve Cities, in particular, assist their correspondents in the speedy collection and transfer of funds, they cooperate in the extension of credit, and stand ready to serve in many other ways. These services provide a real business basis for the deposit relationship, but the deposits do fluctuate rather widely in the ordinary course of business, and they are considered to be particularly vulnerable to withdrawal in times of unusual tightness in the banking system. There undoubtedly is justification for this opinion, and, as a result, a bank with a large volume of deposits from other banks generally follows a relatively conservative investment policy.

UNITED STATES GOVERNMENT DEPOSITS

During the war, deposits of the United States Government in the banking system reached a very high level, amounting to \$23,740,000,000 in all insured commercial banks at the end of 1945. These deposits, which represented the proceeds of securities sold to the public to carry on the

war, were normally paid out by the government for goods and services, and tended to flow back into the banking system in other deposits. This was not true in 1946 because the government's budget was largely balanced on a cash basis, and, as a result, the excess bank balances were available to pay off debt. This reduction in debt resulted in the first sharp contraction in over-all bank deposits in many years. Obviously, a deposit liability of this nature required special treatment in the investment program and, as it turned out, the banking system was well fortified with short-term securities to meet this deposit withdrawal. Nevertheless, the decline in the deposit structure resulting from the repayment of debt by the government was probably the dominant money market factor in the calendar year 1946. With the over-all decline in deposits, banks that did not maintain a conservative investment position with substantial holdings of short-term government securities against their war loan deposit probably found it necessary to sell other securities in a declining bond market. If a large group of banks had maintained an unwise investment position in the face of this condition, the effect on the money market of the forced liquidation of securities might have been exceedingly pronounced.

OWNERSHIP OF DEMAND DEPOSITS

Information is now available with respect to the ownership of demand deposits which is quite helpful in understanding the changes that are taking place in deposits in the commercial banking system of this country.

TABLE 26
Ownership of Demand Deposits
(millions of dollars)

	7-31-43	% of Total	7-31-46	% of Total	% Increase
Total domestic business	\$ 36.3	65.3%	\$44.9	57.9%	23.6%
Total nonfinancial business	31.6		38.3		21.2%
Manufacturing and mining	16.5		16.4		—
Trade	8.0		13.0		62.5%
Total personal	15.8	28.4%	27.6	35.6%	74.7%
Farmers	3.3		6.2		87.8%
Others	12.5		21.4		71.2%
Other	3.5	6.3%	5.0	6.5%	42.8%
Total	55.6	100%	77.5	100%	39.4%

The figures in Table 26 show that there has been a wide variation in the change in demand deposits in the three-year period. Demand deposits owned by individuals, and particularly by farmers, have shown the biggest percentage growth, with an increase of 87.8 per cent for farmers

and an over-all increase in individual ownership of demand deposits of 74.7 per cent.

This growth in demand deposits of individuals was paralleled by an even greater increase in savings deposits, which increased from \$15,697,000,000 at the end of 1942 to \$29,277,000,000 at the end of 1945—an increase of 86.5 per cent.

In striking contrast to the tremendous growth in deposits of individuals, domestic business as a whole showed an increase of only 23.6 per cent in the three-year period, and deposits of our important manufacturing and mining enterprises actually showed a decline. Businesses engaged in trade and merchandising activities in general showed the most favorable experience—an increase of 62.5 per cent in their deposits. It can be easily seen from these figures that banks so organized or situated that they effectively reach the individuals of the communities in which they do business should have had the most favorable relative deposit experience in recent years. Conversely, commercial banks with important contacts in manufacturing and mining businesses have had the least opportunity to expand their deposit base.

Still other significant developments in the war period affected the growth of deposits on a regional basis. Thus, deposits expanded more rapidly in the West and in the South than in other parts of the country, as a result of the greater relative expansion of industrial facilities in those areas, the establishment of military camps, and the very substantial rise in the price of farm products. The rise in farm prices brought greater relative growth in the deposits of most country banks throughout the country than in the deposits of banks in larger centers.

This discussion of deposits is designed to emphasize the basic importance in formulation of investment policy. In general, a bank with a stable deposit structure, made up largely of the deposits of individuals and small businesses, is justified in having a longer-term investment program, if it seems desirable, than a bank dealing with large commercial accounts. Large deposits of other banks need special consideration, as do any disproportionately large or unusual types of deposits. The trend of deposits is at all times of vital importance, serving to temper investment decisions when the trend is adverse, and rendering them more affirmative when the trend of deposits is up.

THE CAPITAL POSITION OF THE BANK

The capital accounts of a bank belong to the stockholders and serve to justify the existence of the bank as a commercial enterprise. The capital position is maintained to provide a measure of protection for the depositors, and it is this margin of protection that permits the bank to assume

moderate risks in the employment of the depositors' money. The size of the capital accounts affects the bank's ability to serve the business community, since the maximum ordinary business loan that can be made to one customer is limited to 10 per cent of unimpaired capital and surplus, and the size of the investment that can be made in the securities of one obligor is limited in the same way (unless the securities are specifically exempted from regulation). The amount of capital relative to deposits is studied carefully by many corporation treasurers, who prefer to place deposits in banks where they believe the capital protection is adequate.

The size of the bank's capital funds, or the margin of protection that depositors have, should be a major consideration in the determination of investment policy. The amount of the capital available for the depositors' protection should be modified to the extent that any unusual portion of these funds is tied up in real estate, since such assets are not liquid.

Recent years have brought highly significant changes in the ratio of deposits to capital funds, with the deposit liabilities of all member banks equal to 15.5 times capital funds at the middle of 1946, as contrasted with a ratio of 9.9 times at the end of 1940, and 5.6 times at the end of 1930. The increase in the ratio of deposits to capital is offset, in the minds of many people, by the fact that 59 per cent of deposits were invested in United States government securities as of June 29, 1946, as against only 11.1 per cent at the end of 1930. Of more significance is the relationship of the capital funds of the bank to the assets at risk. This relationship should be considered carefully in determining investment policy.

Assets at risk may be defined as the invested assets in which there is a risk of material change in value, either from a credit standpoint or from the standpoint of market value. These assets would certainly include the major portion of the loan accounts and all securities in which there is a credit risk. In addition, it is conservative to include United States government securities in which there is a possibility of a material change in price. For this purpose all government securities due after five years might be included, but in this study we have used ten years as the dividing line. As of June 29, 1946, the total loans and securities, other than governments, for all member banks were only 3.7 times capital funds, compared with a ratio of 4.7 times at the end of 1930. Including government securities due after ten years with other assets at risk (loans and other securities), the ratio of assets at risk to capital funds is still only 4.7 times, which is the same as the 1930 ratio on the other basis. These figures indicate an improved capital position as against 1930 if the market-risk factor in government securities is ignored, and a similar

TABLE 27
Capital Position
ALL MEMBER BANKS
(millions of dollars)

	Total Deposits (millions)	Government Securities	Other Sec.	Loans	Total Capital	Deposits Times Capital	Assets at Risk Times Capital Loans & Including Govts. Other Sec. Due after 10 yrs.
12-31-30	37,029	4,125	6,864	23,870	6,593	5.6 X	4.7 X
12-31-34 (low)					4,380		
12-31-40	56,430	15,823	5,982	15,321	5,698	9.9 X	4.7 X
6-29-46	122,519	72,272	6,458	23,302	7,920	15.5 X	3.7 X
RESERVE CITIES							
12-31-30	13,029	1,486	2,031	8,379	1,999	6.51 X	5.2 X
12-31-34 (low)					1,401		
12-31-40	19,844	5,204	1,877	5,931	1,904	10.42 X	
6-29-46	45,893	26,585	2,228	8,862	2,676	17.1 X	4.1 X
CENTRAL RESERVE CITY BANKS							
12-31-30	11,649	1,527	1,388	7,491	2,365	4.9 X	3.6 X
12-31-40	21,454	7,351	1,858	4,080	1,985	10.8 X	3.0 X
6-29-46	33,577	19,130	1,505	7,835	2,570	13.1 X	3.6 X
COUNTRY BANKS							
12-31-30	12,351	1,159	3,359	8,001	2,228	5.99 X	5.1 X
Early 1935 (low)					1,390		
12-31-40	15,132	3,269	2,248	5,309	1,909	7.92 X	
6-29-46	43,049	26,556	2,725	6,605	2,674	16.09 X	3.4 X
							4.6 X

position if government bonds due after ten years are classified as assets at risk.

There is a wide difference in capital position within the banking system, with variations between individual banks far more extreme than the figures for the various groups of banks which are presented. A recent comparison of 37 of the major banks of the country as of June 30, 1946, disclosed 6 banks with deposits of more than 25 times capital funds (excluding reserves) and only 4 banks where the deposits were 10 times capital or less. Looking at the relationship of deposits at risk (defined in this comparison as *gross deposits less cash and governments*) to capital, one bank had deposits at risk of only 43 per cent of capital, whereas in one case at the other extreme, deposits at risk were 8.4 times the capital funds.

Among the various groups of banks, the Central Reserve City banks (New York and Chicago) have the most comfortable capital position with the lowest ratio of deposits to capital, while the Reserve City banks have the lowest capital position in relation to deposits. In the relationship of assets at risk to capital, the banks as a whole appear to be in only a fairly comfortable position, with little variation between the average bank in the larger center and the average country bank. There is certainly no ground for complacency by the banks in figures which show a capital position only moderately stronger than sixteen years ago, and continued emphasis on increasing capital funds appears desirable.

No formula can be evolved from the discussion, and each bank, taking into consideration its capital position, must make its own decisions as to what risks may properly be assumed. In general, we may conclude that a bank with large capital is justified in assuming greater risks, both creditwise and in length of maturity, than a bank with limited free capital.

THE LOAN POSITION AND LOANING POLICY OF A BANK

The investment policy should at all times take into consideration the bank's *loan position*, the *loaning policy*, and the *opportunity* that exists to make loans. The bank's loan position is simply the amount and kind of loans that are outstanding, and would normally reflect the bank's loaning policy which governs the type of loans made and the degree of risk that the bank is willing to assume.

The prime function of a commercial bank is the making of loans to facilitate the transaction of business and assist in its development, and it is only intelligent and proper that a bank should assume its major risks in making constructive loans of this nature. If, as a result of its policies, the bank has a large loan portfolio and is aggressively making term

loans and other loans in which there is a distinct credit risk, the risk element in the investment program should be kept at a minimum.

The banking system has frequently been criticized for its failure to make loans; but the making of loans takes more than a willingness on the part of the bank to provide the funds, and the opportunity to make constructive loans is often limited. If the loan position is relatively small and the opportunity for making loans is limited, a more aggressive investment program is warranted. Investment policy should be flexible, and an investment position should be avoided that would at any time limit the bank's ability to make sound business loans.

THE BANK'S EARNING REQUIREMENTS

The commercial banking system is an integral part of our capitalistic society, and each bank is organized with the objective of earning a return for the stockholders who supply the capital. The banks have a responsibility to their depositors that must govern the use of deposits; but against that background the bank must justify its corporate existence by the intelligent employment of the depositors' money and the performance of other worth-while services, to the end that the stockholders receive a reasonable return on their investment.

Earning requirements vary widely between banks, depending upon local conditions, the type of deposits, and the relationship of deposits to capital. For example, a bank with large deposits in relation to capital might earn a very high rate of return on the capital invested by following a very conservative policy. Another bank with more capital might find that the same policy produced a very unsatisfactory result. A bank with large savings deposits upon which interest is paid must normally expect a higher return in the employment of such funds than in the employment of ordinary commercial deposits.

It is the job of the bank's staff to appraise the risk that may safely be assumed in the extension of credit and the making of investments, and, if at all possible, to earn a satisfactory return on the stockholders' investment. It probably is axiomatic in any business that intelligent risk-taking produces a far more satisfactory result in the long run than unintelligent conservatism. Intelligent risk-taking in the banking business should produce satisfactory earnings; and, over the years, earnings provide the only sure protection against capital loss.

There is no implication in this discussion that a satisfactory return is always possible, nor that, on the other hand, a bank should stop taking risks when a satisfactory level of earnings is attained. Improper risks should never be taken, but in the ordinary course of business there are

many cases where the determination of what is proper or improper involves a very close decision.

The desire for earnings is a driving force in all businesses. In the banking business it forces banks to use ingenuity in developing ways to employ their funds, and at times this may lead to the making of unwise loans and investments.

This need or desire for earnings is also a force in our money markets that is not too well understood. The growth of the banking system with its fairly heavy overhead of fixed expenses, and the growth of insurance companies with their contractual obligations, are forces in our money markets that, in a sense, go counter to some of our old conceptions of supply and demand. Under the old theories of supply and demand, if prices of securities go up and the yield decreases, they lose attractiveness and the demand lessens. This is the normal situation with individual investors who have complete freedom of action; but it is not entirely true in the case of institutions, because as yields go down their need or desire for earnings does not go down proportionately. In fact, to maintain earnings it becomes necessary for the institution either to invest more money (which is not always possible), buy longer maturities, or reduce the standard of quality. It is not suggested that institutions blindly follow this path; but the tendency exists, and the growth in institutional savings is a factor that must be considered.

AVAILABLE SUPPLY OF SUITABLE INVESTMENTS

At the end of 1946 the commercial banking system of this country was quite fully invested with excess reserves in Federal Reserve Member Banks amounting to only \$560,000,000—an amount equal to about 0.5 per cent of Member Bank deposits. Except for a sharp increase in deposits resulting from an increase in monetary gold and silver supply or from a substantial reduction in money in circulation, the banking system will remain rather fully invested unless the Federal Reserve System acquires debt in the open market or changes reserve requirements. This is evident when one considers that any sale of securities by the banking system (except to the Federal Reserve Bank), or any payment of a loan, is normally accompanied by an equivalent reduction in deposits, the only offsetting factor being that reserve requirements also decline and investable funds increase moderately.

Nevertheless, in the face of this fully invested position the banking system is able to extend new credit and make selective purchases of securities freely because the Federal Reserve System, in its own market activities, stands ready to acquire short-term government securities which are held in large amounts by the banks. In further support

of this situation, the Federal Reserve System charges its members a low rate of 1 per cent on borrowings which are collateralised by United States government securities or certain other eligible paper. Thus, central banking policy makes possible the continuing desire to make new loans and investments at the present time.

SELECTIVE DEMAND

There is, of course, usually a selective demand for different types of investments and a demand for loans which might be substituted for investments. These selective demands may result from the changing character of a bank's deposits (that is, an increase in savings accounts) and from changes in the bank's tax status, which may make shifts in the type of securities owned advantageous. The demands may result from the paying off of securities owned by a particular bank, either at their maturity or through a refunding operation, or they may come from changed opinions as to the relative attractiveness of securities in different maturity ranges considering general economic developments and the relative level of yields. The desire to make loans in substitution for investments persists because banks consider the making of loans to be their prime function and because a higher return is generally available. Banks are also influenced in their loaning policy by the fact that loans at a recent date were only 22 per cent of total invested assets. Another important factor that creates a demand for securities (as well as a supply) is the shift in deposits around the country and even from one bank to another in the same city.

The point being stressed is that the principal demand for investment in the banking system is not an outright demand based on idle deposits but rather a selective demand for different securities and a constantly shifting demand between banks resulting from changes in deposits and from changing opinions as to the attractiveness of securities in the market. The demand is maintained at the present level of intensity by the banks' large holdings of short term governments and by Federal Reserve policy with respect to open market purchases of these securities.

SUPPLY

The supply side of the investment picture has two important components as follows:

1. Newly created debt (new capital or refunding):
 - a. U. S. government.
 - b. State or local government.
 - c. Government agency.

- d. Corporate.
- e. Foreign government.
- 2. Outstanding debt offered for sale.

The year 1946 was reasonably active in the capital markets, with the important activity centered in the corporate and municipal field. During the year, \$3,300,000,000 of corporate and municipal bonds were sold publicly, giving the investor a wide selection of credits and type of security. This contrasts with a total of \$4,000,000,000 in 1945. The year brought no important public financing in the federal government field, with operations confined to paying off debt and refunding maturities with short-term obligations.

In addition to the newly created debt which is brought to market from time to time, there is always a fairly large supply of seasoned securities being offered for sale in the open market. These securities are offered for sale for many reasons. For example, a bank may lose deposits and be forced to sell securities. Securities may also be offered for sale by banks to provide funds to make other investments or to make loans. Investors, generally, may sell to provide funds for specific purposes or simply because of a preference for cash.

EFFECT OF UNITED STATES TREASURY POLICY ON SUPPLY

We have dealt so far with the supply and demand for investments in the banking system in rather general terms. One aspect of the supply side of the investment picture is so important that it deserves special emphasis, and that is the impact of the financing policies of the United States Treasury on the supply of investments available for bank investors. The figures in Table 28 show the changes that have taken place in the last few years in the composition of the marketable federal government debt which commercial banks are permitted to own.

It is extremely significant from the standpoint of the commercial banking system that the proportion of government debt that is eligible for their ownership due or callable within one year has increased sharply from 10.9 per cent of the total to 45.1 per cent since 1941, and that the supply of longer-term governments due or callable after 10 years has declined, not only proportionately, but also in actual amount.

It is also significant that within a comparatively few years the bulk of the investments of the banking system will be of very short term, unless the banks are given an opportunity to acquire additional longer-term issues. As of June 30, 1946, commercial bank holdings of marketable Treasury securities due after 5 years, based on call dates, exceeded \$27,-400,000,000. Simply because of the passage of time the total bank hold-

ings due or optional after 5 years will drop to only \$6,300,000,000 four years hence, unless important additions are possible.

TABLE 28
*Marketable Federal Government Debt
Eligible for Commercial Banks*
(Maturities based on call dates)
(millions of dollars)

	12-31-41	% of Total	6-30-46	% of Total
Due in 1 yr.	\$ 5,241	10.9	\$ 62,091	45.1
Due in 1-5 yrs.	17,708	42.0	35,057	25.4
Due in 5-10 yrs.	12,318	26.8	32,847	23.8
Due in 10-20 yrs.	9,925	13.2	4,251*	3.1
Due after 20 yrs.	2,661	3.5	3,564*	2.6
	<hr/> 47,857	<hr/> 100%	<hr/> 137,810	<hr/> 100%
Marketable debt restricted as to bank ownership (all due after 10 yrs.)	<hr/> -0-		<hr/> 51,792	
Total marketable debt	<hr/> \$47,857		<hr/> \$189,602	

* Includes \$1,663,000,000 of U. S. Government securities which banks are permitted to own in restricted amounts.

This situation is brought about by the policy of the federal government, which was started in the War Loan drives, of issuing longer-term marketable debt which the commercial banks were not permitted to own except in a very limited amount. These securities were issued in the total amount of \$53,455,000,000, of which commercial banks owned \$1,663,000,000 as of June 30, 1946. A curious result of this program is the fact that the mutual savings banks of the country, with time deposits of \$16,281,000,000 at the end of June, 1946, owned \$8,535,000,000 par value of United States government obligations due after 10 years; whereas, the commercial banks of the country, with about double the time deposits at the same date (\$32,429,000,000), owned only \$5,633,000,000 of the longer-term governments. A great deal of thought is being given to the possible effects of a continuation of this policy by commercial banks and investment bankers, and we shall return to this subject in another phase of the discussion.

EFFECT OF REGULATION

Aside from the question of what securities are available in the market, there are banking laws and regulations that have their influence upon bank investment activities. These laws and regulations place no restrictions upon the banks' activities in certain securities; they prohibit, en-

tirely, investments in some securities, and limit the amount that can be invested in other issues. It would take many pages to spell out in detail the many regulations and laws governing bank investment, particularly since each state has its own laws for its own state banks. Certain rules and regulations that have rather widespread application will be summarized. Except where note is made to the contrary, these rules are those of the comptroller of the currency and apply to national banks.

SECURITIES NOT ELIGIBLE FOR BANK INVESTMENT

Banks generally are prohibited from investing in the following securities:

1. Shares of stock cannot be purchased in any corporation with these exceptions:
 - a. Up to 15 per cent of capital and surplus may be invested in the stock of a company engaged in the safe deposit business.
 - b. In general, the stock of a company holding property which is needed by a bank for banking purposes may be acquired.
 - c. Under certain circumstances, up to 10 per cent of capital and surplus may be invested in the stock of a corporation engaged in foreign banking.
 - d. Members of the Federal Reserve System are required to subscribe to Federal Reserve Bank stock.
2. Banks are prohibited from investing in securities which are convertible into stock at the option of the issuer.
3. Investment is prohibited in securities which are convertible into stock at the option of the holder if the price paid for the security is in excess of the investment value of the security considered independently of the conversion feature.
4. Banks are prohibited from purchasing securities in which the investment characteristics are distinctly or predominantly speculative; or securities which are in default, whether as to principal or interest.

SECURITIES EXEMPT FROM ALL RESTRICTIONS

The following are exempt from all restriction:

1. Obligations of the United States government.
2. General obligations of any state or any political subdivision thereof.
3. Obligations issued under the Federal Farm Loan Act as amended.
4. Obligations issued by the Federal Home Loan Banks.
5. Obligations of the Home Owners Loan Corporation.

In some states there is no restriction on the investment of funds of state banks in obligations of Hawaii, Puerto Rico, and the District of Columbia; and, on the other hand, in Ohio and probably in other states, the obligations of political subdivisions outside of the state, other than general obligations of state governments, are not specifically exempted from regulation.

SECURITIES SUBJECT TO LIMITATION AS TO AMOUNT THAT CAN BE INVESTED

Generally speaking, all securities which are not specifically exempted from regulation or prohibited must qualify as *investment securities* or must meet other standards prescribed by state banking authorities. Not more than 10 per cent of the unimpaired capital and surplus may be invested in the securities of any one obligor. Securities which must qualify as *investment securities*, or meet other tests, include the following:

1. All corporation bonds (public utilities, railroads, industrials, and so forth) whether notes, mortgages, or debentures, collateral trust securities or equipment trust certificates.
2. Foreign bonds—government, municipal, corporate.
3. Revenue obligations of political subdivisions or governmental agencies.
4. In some states, general obligations of political subdivisions of other states.

Various states have set forth minimum requirements for eligibility for certain classes of these securities. The requirements in the case of municipal bonds may relate to the size of the community, the question of default record, and the size of the debt. In some states revenue bonds are considered on their individual merits by state banking authorities.

To come within the general classification of *investment securities* the obligation must be a marketable obligation (with certain unimportant exceptions); it must be in the form of bonds, notes, or debentures commonly known as investment securities; and where the security is issued under a trust agreement, the agreement must provide for a trustee independent of the obligor, and such trustee must be a bank or trust company. As stated previously, the bank must not purchase securities in which the investment characteristics are distinctly, or predominantly, speculative.

For the purpose of guiding examiners in their work and assisting banks in their judgment as to quality, the first four ratings of the recognized investment services are generally described as eligible ratings (AAA, AA, A, and Baa; A1+, A1, A, and B1+). These ratings, which are available chiefly on corporate issues, represent the independent judgment of the

rating services as to the relative quality of securities.

There can be little doubt as to the usefulness of ratings when utilized properly, but they should never be a substitute for independent judgment on the part of the investor, nor should they be used as a primary tool by the investment banking business in effecting the sale of securities to the public. This is a point that should be well understood by those engaged in the public distribution of securities.

The mere fact that a bond carries a so-called *eligible* rating does not mean that it is a satisfactory investment for any particular bank or for any investor, even on the basis of quality. In the first place, there may be a wide difference in the quality of bonds carrying the same rating, and the bank's judgment of quality may differ materially from that of the rating service. In the second place, the bank may already own all of the securities that it should in the particular quality range in question. Finally, the bank may believe that the price is not attractive, considering quality, either actually or relative to other securities. Banks should form their own judgment as to the qualifications of an investment considering quality, maturity, price, and other factors and, generally speaking, should use ratings only as a check on their own thinking.

OTHER CONSIDERATIONS

In this discussion of the supply of investments, the suitability of investments has been touched upon largely from the standpoint of eligibility. Many other considerations render a security suitable or unsuitable for a particular bank. To a large extent, these considerations involve matters of judgment, but there are certain fundamentals that have broad acceptance by bank investors.

Forgetting income considerations for the moment, the security most suitable for bank investment is the one that combines the least credit risk with the greatest liquidity and the least risk of price fluctuation. The obligations of the United States government meet these qualifications to the greatest extent that is possible. No credit risk is involved in the obligation of our own government, which not only has taxing power but also controls the currency issue. United States government securities are available in practically any range of maturity, and, under ordinary circumstances, are extremely liquid; transactions in large amounts can be handled at very small cost.

INVESTMENT SECURITIES OTHER THAN GOVERNMENTS

It is not possible, within the limits of this discussion, to describe in detail the characteristics of the various other types of securities that are available for bank investment. As the bank investor leaves the field of

government securities, which qualify for bank investment to the fullest extent possible, he loses some of the investment elements which are considered desirable. The extent of the loss, which may be in quality, in liquidity, or in stability of price, may be relatively unimportant, but, to the degree that there is a loss, the bank investor should be compensated by a higher net return on the money invested. It is true that some diversification is accomplished, but it is doubtful if there is any purpose in diversifying against United States government obligations. Certainly, the gain in diversification is of questionable value, if that is the only consideration, if quality has suffered and liquidity has been reduced. The important objective that a bank should have in the purchase of investment securities other than United States government obligations is an increased return over the return that is available in the comparable range of maturity in the government market. Occasionally a bank may purchase investment securities to assist a banking customer in financing his needs, but such purchases are not a large part of the bank's investment activities.

In the purchase of investment securities for income, the bank should be certain that a really worth-while increase in income is obtained, considering the risk that has been accepted. There is a wide range of quality in all fields of investment outside of federal obligations, and the appraisal of the degree of risk, and of the adequacy of the return considering the risk, is a difficult matter and largely a question of judgment. In the last few years the risk factor in investment securities has seemingly been minimized by the prosperity of the country generally, and at times the spread in yield between many high-grade bonds and government obligations has almost vanished. The permanence of this situation is not assured, and 1946 witnessed some fairly sharp reappraisals of credit risk in the corporate field. The bank investor should be careful to look at the past record and at the future outlook in appraising an investment, and should not be lulled into a state of carelessness by any present period of prosperity.

TAX-EXEMPT SECURITIES

The field of tax-exempt securities is a special one and should be given close attention by those who deal with bank investors. In this class of security the investor must compare the yield that is obtainable with the net yield that can be secured in other securities after the payment of taxes.

Perhaps the commonest mistake made by investors in this class of security is to consider only the current rate of taxes that are paid. For example, when the excess profits tax law was in effect, banks who had

earnings subject to this tax found the purchase of tax-exempt securities quite advantageous, based on the net return after tax. However, the market for tax-exempt securities reflected this situation to some extent, and an offsetting decline in market price was certainly possible when the excess profits tax was eliminated, if a longer-term bond was purchased on the basis of the value of one or two years' tax exemption. It is, of course, not possible to know what our tax structure will be for any extended period in the future, but attention should be given to possible and probable changes in tax rates when investments are made in tax-exempt issues.

VALUE OF TAX EXEMPTION

There is a wide difference in the value of tax exemption to various groups of bank investors. Under our present corporation tax laws, corporations whose income falls under \$50,000 before tax have special treatment. The tax rates in 1946 were approximately as shown in Table 29.

TABLE 29
Corporation Tax Rates—1946

	<i>Normal Tax</i>	<i>Surtax</i>	<i>Total</i>
On income between \$0—\$25,000	17% (average)	6%	23%
On income between \$25,000—\$50,000	31%	22%	53%
On income over \$50,000	24%	14%	38%

A corporation with earnings over \$50,000 faced a combined normal and surtax of 38 per cent. Any corporation that earned \$50,000 or less paid a tax that was no higher, on the average, than 38 per cent. On the income that fell between \$25,000 and \$50,000, however, a tax was assessed at the rate of 53 per cent, whereas the tax on earnings of \$25,000 or less was no more than 23 per cent on the average. Banks whose earnings fell in the lowest brackets found the least interest in municipal securities because the level of rates tends to be set by other investors who find the tax exemption more valuable. The bank investor with income between \$25,000 and \$50,000 found the tax-exempt market the most interesting of any bank investors, as is indicated in the figures in Table 30.

It will be seen from these figures that there is an extremely wide difference in the net yield on taxable securities to banks that pay these varying tax rates. When one considers that municipal securities are available to all of these banks at the same rate, the relatively greater attractiveness to the bank paying the highest tax is apparent. For example, the investor purchasing a short-term municipal bond to yield 1.00 per cent as an alternative to the taxable United States Treasury 2 per cent bonds due 12-15-54/52 loses 0.14 basis points in yield after taxes if in the

lowest tax bracket, gains 0.08 basis points if taxes are paid at the rate of 38 per cent, and gains 0.31 basis points if the income would otherwise be subject to a 53 per cent tax.

TABLE 30
*Representative United States Treasury Bonds Showing Net Yield
to Bank Investors Subject to Different Tax Rates*

		<i>Net yield to banks with earnings in the indicated earning brackets</i>			
	<i>Market 12-31-46</i>	<i>Yield before tax</i>	<i>\$0- 25M 23%</i>	<i>\$25- \$50M 53%</i>	<i>Over \$50M 38%</i>
U. S. Treasury 2% bonds due 12-15-54/52	102-30/32	1.48%	1.14%	.69%	.92%
U. S. Treasury 2¼% bonds due 9-15-59/56	105-9/32	1.66%	1.28%	.78%	1.03%

It does not follow that a bank in the 53 per cent tax bracket should blindly purchase municipals because of their apparent attraction. Purchases of municipals should be made with due regard to credit risk and the need for liquidity. Consideration should be given to the relative risk of price fluctuation, and it should be remembered that a tax advantage can be obtained by shifting short-term governments into short-term municipals as well as by a shift between longer-term issues.

THE ORGANIZATION AVAILABLE TO SUPERVISE THE INVESTMENT PROGRAM

During 1946, which was a year of relatively firm bond prices, certain banks fell into serious error through the purchase of securities which at no time constituted proper investments for their particular use. The portfolios of several small banks which came to the attention of the present writer contained investments in long-term, low-coupon municipals which, for the most part, were purchased in the early months of 1946. These municipal issues, which were good quality, later declined in price very sharply, in a few cases as much as 20 points. This was unfortunate, of course, but the really unhappy side of the situation was that there was never any sound reason for these particular banks to have made the investments. The banks were in the lowest tax bracket, and taxable government securities would at all times have given a higher net yield to the bank than the tax-free return on the municipal obligations. As stated previously, the mistakes were primarily mistakes made by the banks; however, the dealers who sold the securities were probably guilty

of poor judgment if they valued a continued relationship with their customers.

Some of the best managers of bond portfolios are found in small banks. These men, generally speaking, have a long experience in the banking business, have a good deal of flexibility in their operations, and are not swayed too much by the hysteria of the moment. On the other hand, there is a tendency in many banks to feel that investments once made will take care of themselves, and that the cost of managing the bond account can be held at a very low figure. This is, perhaps, possible if securities owned are confined to United States government securities, although even in that case the best results are not likely to be obtained. Attention should be given to the bond account and to the changes that are taking place constantly in all of the markets. Generally speaking, an investment program that involves the purchase of securities in which there is relatively high degree of credit risk becomes an exceedingly risky venture if the program is not supervised by an adequate staff with a broad knowledge of the money market and experience that enables them to give careful attention to credit risks.

MATURITY PROGRAMS

In general, most banks lean toward a *maturity program*, which is a program with a certain proportion of the account due more or less regularly each year over a period of years. Such a program reinforces the liquid position of the bank because as time passes securities are steadily moving into the short-term category. At the outset there is some sacrifice of income in a maturity program in the purchase of shorter-term securities which yield less than longer issues; but each year the bank is theoretically able to reinvest securities that mature in the longest-term securities which are included in the program. This is possible because the securities which mature would normally be replaced in the short-term category by other issues whose maturities become shorter. Over a period of time, as a result of this reinvestment each year, the bank would earn a return equal to the average rate through the years on the longest-term securities purchased.

It is often suggested that such a program, with maturities more or less regularly spaced over a ten-year period, is the ideal investment plan for a commercial bank. It is not an entirely practical plan for many banks today, however, because of the limited supply of government bonds that banks can buy maturing after the 2 per cent bonds due 12-15-54/52. As a consequence, the customary bank portfolio is probably somewhat representative of a typical maturity program today, with maturities in

each year through 1952, but with scattered holdings after that date that do not fit into any particular pattern.

Another approach to the investment problem that some banks adopt involves the maintenance of a very adequate position in short-term securities, perhaps in a larger proportion than in the portfolio we have before us, and a concentration of the balance of the investment in securities of longer maturity, with no effort to space maturities over a period of years. Such a program probably provides greater income, and, in theory, makes adequate provision for deposit fluctuation. On the other hand, this program would produce greater relative price instability than the program of spaced maturities and might be less flexible in bad markets. In any case, such a policy is not possible for any large section of the banking system because the longer-term government securities are not available to meet bank investment demands of large proportion.

INVESTMENT OF SAVINGS DEPOSITS

The discussion of investment policy has assumed an over-all program which takes into consideration the type of deposits, need for earnings, and other important considerations. In developing an over-all policy, it is becoming increasingly advisable to give close attention to the investment of the savings deposits on which interest is paid. The necessity for this is apparent when one considers that the average yield on the hypothetical portfolio was only 1.25 per cent based on the markets on 12-31-46, which certainly does not provide an adequate return against interest payments at the rate of 1.00 per cent on savings deposits. In this hypothetical bank, the savings deposits amount to \$30,000,000. If the total investment in government securities maturing or callable after 6 years were allocated against the savings deposits, together with \$5,000,000 of the \$8,000,000 investment in other securities, the over-all investment of the savings accounts might be as shown in Table 31.

If the bank has \$5,000,000 of real estate loans and \$5,000,000 of other loans (perhaps term loans) that are properly allocated to savings, producing the result outlined above, it is possible that a satisfactory return is being realized on the savings business, depending upon the operating costs and other expenses that must be charged to the operation. On the other hand, if the bank has few mortgage loans, or other loans, properly used in this way, the profit might be very unsatisfactory since it would be necessary to allocate a much larger amount of relatively low-yielding 1- to 6-year governments against the savings deposit business. After allocating a high proportion of the bank's high-yielding assets against the savings deposits, it may be found that other parts of the bank's

business are not on a satisfactory basis. Only from careful analysis of the reasonable investment needs of the various component parts of a bank's business can a sound over-all policy be developed.

TABLE 31

Savings deposits		\$30,000,000
<i>Investments & loans</i>	<i>Maturity</i>	<i>Assumed interest earned</i>
<i>Allocated to savings deposits (call dates)</i>		
\$ 7,000,000 government bonds	after 6 yrs.	1.75%
5,000,000 " "	1-6 yrs.	1.15%
3,000,000 cash & governments	1 yr.	.45%
5,000,000 corporates & municipals		2.50%
5,000,000 real estate loans		4.00%
5,000,000 other loans		3.00%
<hr/> \$30,000,000	Average rate	<hr/> 2.22%

REVIEW QUESTIONS

1. What are the investment responsibilities of bank officers to depositors; to the business community; to the bank's stockholders?
2. Define the following terms:
 - (a) Assets at risk.
 - (b) Deposits at risk.
3. What is the function of a bank's capital with respect to its deposits?
4. Explain how each of the following factors affects the investment program of a commercial bank:
 - (a) The character of the money that is being invested.
 - (b) The capital position of the bank.
 - (c) The loan position of the bank and its loaning policy.
 - (d) The earnings requirements of the bank.
 - (e) The available supply of suitable investments.
 - (f) The organization available to supervise the investment program.
5. What is the relative proportion of time deposits and demand deposits in the over-all banking system?
6. What class of depositors tends to have the greatest stability? The least stability? Why?
7. What effect might a normally large volume of deposits from other banks have upon a bank's investment policy?
8. What effect does the existence of government war loan deposits have on the investment policy of a bank?
9. What significant trends in the ownership of demand deposits occurred during World War II?
10. What factors lead to a demand by commercial banks for various types of investments and loans?
11. What are the principal sources of supply of investments?
12. What effect has United States Treasury policy upon the supply of eligible investments?
13. What significant changes have occurred during the period 1941-1946 in the maturities and quantities of government securities owned?

14. In general, what securities are not eligible for bank investment?
15. In general, what securities are exempt from all bank investment restrictions?
16. What are the requirements that must be met by an obligation to be classified as eligible for bank investment?
17. What ratings of recognized investment services are generally considered by bank examiners to qualify the securities as eligible?
18. What are the characteristics of a security that would be most suitable for bank investment? What security best meets these requirements?
19. What are the primary considerations in deciding whether a bank should invest in governments or other eligible security?
20. What factors must be considered by a bank in deciding whether to purchase tax-exempt securities?
21. How is the value of a tax exemption to a bank computed?
22. What effect have possible deposit fluctuations upon the investment policy of a bank?
23. What are the required cash reserves that a member bank must maintain with a Federal Reserve Bank?
24. What are the advantages and disadvantages accruing from a policy of holding a very adequate position in short-term maturities with a concentration of the balance in long-term securities?
25. What are the advantages and disadvantages of following a policy of having a certain proportion of the portfolio mature more or less regularly over a period of years?
26. Why is it necessary to give close attention to the investment of savings deposits on which interest is paid?
27. To what extent should a bank purchase additional long-term government securities against the possibility that there will be a growing scarcity in the future of higher yield intermediate and longer-term government securities in which banks would be permitted to invest?
28. What role did the banks play in financing World War II?
29. In general, how does the management of the public debt affect the investment policy of banks?
30. If the yield on United States government bonds increased from, say, 2 per cent to 3 per cent, what effect would it have on a bank's holdings of such securities if they averaged 5 years to maturity? 10 years? 15 years? (Consult your basis book.)
31. Does the National Bank System have sufficient capital to withstand such a market decline indicated in question 30 above, assuming maturities average five years? Discuss.

INVESTING FOR A LIFE INSURANCE COMPANY

by Joseph M. Bell, Jr., *The Equitable Life Assurance
Society of the United States*

THIS DISCUSSION will be limited to the problems of portfolio management of a life insurance company, since there are great differences between the portfolio problems of the life insurance companies, on the one hand, and fire, casualty, and other kinds of insurance companies, on the other hand. While most insurance companies are regulated, there is little or no relationship between the kinds of regulation applicable to a life company and, for example, a fire company. Most of the larger life companies are mutual companies owned by their policyholders, while most of the larger fire companies are stock companies owned by the stockholders. Their investment problems differ because of income tax laws as well as state regulatory laws, which will be discussed more fully later.

Stock fire companies are corporations within the meaning of the federal income tax laws, and since corporations receive a credit of 85 per cent of most dividend income, but no credit against interest income, it will be found that most fire companies are not interested in bond purchases at this time. For example, their net return after income taxes on a 4 per cent industrial preferred stock is 3.77 per cent as against 2.48 per cent on a 4 per cent bond, or 52 per cent greater. Obviously, it is impossible to obtain high-grade bonds yielding 4 per cent at present. Further, to derive the same net return on a bond as on a 4 per cent stock, the bond would have to bear a rate of more than 6 per cent. Mutual life companies are subject to a special section of the income tax laws which need not be discussed here but which minimizes the advantage of dividend income.

The nature of the liabilities of various types of insurance companies are not at all similar. Life companies give contracts over the life of an individual. Fire or casualty companies usually issue one to three year contracts and have the opportunity of revising their rates at the end of those periods based on their experience during the contract period. It is

a titanic job for a life company to revise its contracts applicable to new business to reflect major adverse changes in mortality rates, interest earnings, or operating expenses. Such revisions involve literally millions of actuarial calculations which must be checked and rechecked, and which must be translated into new rate books, policy forms, and so forth. It therefore behooves the life companies to make very careful estimates of what the future may hold for them when they are considering revising the terms to be offered in new contracts. It is evident from this that the problems of life insurance companies are very unlike those of other insurance companies.

SIZE OF LIFE INSURANCE COMPANIES

Life insurance companies, individually and as a whole, constitute tremendous aggregations of capital. Of the ten largest business enterprises in the country, measured by assets, four are life insurance companies, four are commercial banks, and only two are nonfinancial institutions. Life insurance companies achieve their growth through the savings of millions of people, whereas commercial banks grow primarily through the expansion of credit which, to a great extent, is within their own control. They can, for instance, increase their deposits and their size by either loaning money to or by acquiring assets from individuals outside of the banking system. But life insurance companies grow because many individuals set aside something from their pay envelope at regular intervals to protect their future. The life companies are savings institutions in the fullest sense of the word.

The admitted assets of all of the legal reserve life insurance companies amount to about \$45,000,000,000, and this pool of resources constitutes a kind of revolving fund available to sound industries of all kinds for the expansion of their services to meet the needs of the public, and to individuals to finance their homes and farms.

On September 30, 1946, the legal reserve life companies owned 33 per cent of the bank-restricted Treasury bonds, while at the end of 1945 they owned about 35 per cent of all of the debt of the Class I railroads of the country, something more than 50 per cent of the debt of the public utility industry, and large proportions of the outstanding debt of the steel companies, oil companies, tobacco companies, credit companies, equipment companies, and an almost endless variety of other companies. They are currently growing at the rate of about four billion dollars per year.

INVESTMENT LAWS RELATING TO LIFE INSURANCE COMPANIES

Most life insurance companies, if they are to operate on a national scale, must comply with the investment laws relating to life insurance

companies in their several home states and, to some extent, in the states in which they expect to operate. Since the state of New York has one of the best insurance departments in the country, and its laws are used as models by a number of other states, we shall consider a few of the major sections of those laws which apply to investments.

New York companies may not acquire any kind of investment except those prescribed by law; however, the laws give a considerable degree of latitude to the investment officers of the companies, thus permitting the exercise of investment judgment. They may buy real estate mortgages if the mortgage is not more than two thirds of the value of the real estate. They may buy, without limit, securities issued by the United States or its political subdivisions; Canadian governments and provincials to the extent of 10 per cent of their admitted assets; Canadian municipals or corporates to the extent of $1\frac{1}{2}$ times their reserves against their Canadian policies; obligations of other foreign governments to the extent of $1\frac{1}{2}$ times their reserves against policies in those countries; and they may buy securities of domestic corporations, including debt securities, both secured or unsecured, and preferred stocks, provided these domestic corporations meet certain tests.

Life insurance companies cannot, under the existing laws in New York, buy any common stocks, although some of the insurance companies incorporated in other states may buy limited amounts of such stocks and certain other kinds of investments not permitted by New York law. In Connecticut, for example, insurance companies are permitted to make investments not specifically prescribed by law up to 5 per cent of their assets, prudent business judgment being the sole test. There has been great agitation from time to time to permit the acquisition of common stocks by New York life companies, but the laws have not yet been broadened to permit this. Recently, New York companies were permitted for the first time to acquire real estate in limited amounts other than for their own use.

In general, the laws governing investment of life insurance funds are sufficiently flexible to permit the exercise of a wide range of investment judgment and policy. From time to time one finds some provision of the law which has become outmoded and needs revision, and there is usually little or no difficulty in getting any reasonable modification by act of the legislature. It may be recalled that under one ridiculous provision of the law of a few years ago the debentures of Standard Oil of New Jersey could not be qualified for investment by New York insurance companies. The present law does not permit New York companies to buy more than 10 per cent of the preferred stock of a given company, regardless of the size of the issue, and this on its face is questionable.

At the present time under the New York laws pro forma fixed charges may not be used to qualify any unsecured issue for investment unless the company has been in bankruptcy or has acquired within five years the assets of another corporation substantially as an entirety. Thus, if a recapitalization of a solvent company is effected under the Public Utility Holding Company Act, actual earnings and actual fixed charges over the past five years must be used, even if such charges resemble only remotely the new charges as established by the recapitalization. In all probability, these requirements will be changed to conform to present-day circumstances.

GROWTH OF LIFE COMPANIES

The tremendous and continuous growth of the life companies is due in part to continuous sales of new insurance, but primarily to the fact that these companies issue life policies on the basis of the level-premium plan.

The level premium simply means that the policyholder pays the same gross premium for his insurance each year. In the earlier years he is paying materially more each year than the actual cost of his insurance based on his expected mortality for each of those years. But in the later years he is paying materially less than the actual cost. In the earlier years the excess payments included in the premium each year are invested and the interest earnings set aside and reinvested to defray the deficit in his payments in the later years. It is this constant accretion of funds from level-premium receipts and from interest earnings on these funds which creates the major financial problem for life companies.

GENERAL PROBLEMS

In general, the goal of the investment policies of all life insurance companies is about the same, namely to obtain the greatest yield on their funds commensurate with safety of principal. But within this general objective, there is a wide variation of methods as well as results.

It is fair to say that, in the smaller companies, the problem of portfolio management is relatively much simpler than in the large companies. The size of the holdings in any one situation is proportionately less, and, therefore, such holdings can be disposed of with less effect on the market. Acquisitions of securities are also more readily made in the open market if the desired amount is relatively small. Advantage can be taken of temporary disparities in yield between various bonds with a minimum of disturbance to the general market. Also, the smaller companies can more easily accommodate their investment policies to take advantage of temporary trends in the money market.

INVESTMENT RESPONSIBILITY

Final responsibility for the investment of funds of New York life companies is vested by law in a committee of the board of directors of each company, and no security may be purchased until its approval has been obtained. The kind of men and the attitude of those men comprising the finance committee must be, therefore, a determining factor in the investment policy of a given institution. If they have confidence in, and are willing to rely on, the investment staff, then the work of the staff is greatly simplified, and the judgment of the staff becomes important to the investment policy of the institution.

It is the responsibility of the investment department (subject to the finance committee's authority) to invest the funds in such a way that payment can be made to the policyholders in accordance with their contracts. This problem is similar in many ways to the investment problems of other institutions or persons, except as to the scale of operation.

PRIVATE DEALS

A development of recent years which has caused a radical change in the kind of investment personnel has been the so-called private deal. It is merely a direct negotiation of an issue of securities between the borrower and the lender, but it requires a very much higher degree of investment skill than in the case of a purchase of an existing security.

In a private deal, all of the protective provisions to be embodied in the indenture must be negotiated with the company and, clearly, such provisions must be designed to fit the problem of the company and to protect adequately the rights of the investor. These provisions would include such things as term, redemption prices, sinking fund, maintenance and improvement funds, issuance of additional bonds, limitations on prior liens and on other debts, dividend covenants, and so forth. These provisions are of the utmost importance both to the borrower and the lender. Obviously, the borrower cannot afford to enter a long-term agreement which does not recognize his future problems, and which might tie him into such knots as to impair seriously his ability to meet the needs of his business. From the lender's point of view, there must be a framework of protection to assure him that the integrity of his investment will be maintained.

One might not appreciate the great importance that some of these protective provisions have over the life of a long-term bond issue. In the old days it was customary for bonds to be issued under the so-called gross-additions mortgage in the utility and railroad fields. This provision meant that the company could issue additional bonds against gross property additions with no recognition of the fact that the physical

properties were continually depreciating. It failed to recognize that some part of those gross additions should not have been bondable since they should have been added to maintain the integrity of the estate. Later, mortgage indentures recognized that the companies should make some charge to their earnings because of depreciation that was accruing, but they did not require that funds representing such depreciation should be invested in properties which were nonbondable or in the retirement of debt.

It is well known that modern indentures do require that certain percentages of gross revenues or of depreciable property must be deposited annually with the trustee and used for nonbondable property additions or for the retirement of debt. While many of the modern indentures express this percentage in terms of gross revenues, there is, nevertheless, a relation between such amounts and the total physical properties or depreciable properties. This is usually in the neighborhood of 2 per cent of property. Therefore, in a 30-year bond such a fund will require the company to invest in nonbondable property an amount equal to 60 per cent (30 times 2%) of the amount of the total property at the date of issue of the bonds. Since most mortgages on utility properties are in the neighborhood of 50 per cent of the amount of the property, it is readily seen that this provision insures, to a considerable degree, the soundness of their bond issues.

It is not the purpose here to discuss the relative merits of the private deal or its advantages and disadvantages, but it is appropriate to say that the technique of investment has been greatly influenced by the private deal and that an improved kind of indenture has resulted from its evolution. It is serving a useful purpose both to the large investing institutions and to the borrowers and has made a place for itself because it meets an economic need.

SCARCITY OF INVESTMENT OUTLETS

The most pressing portfolio problem for insurance companies in recent years has been the scarcity of investment outlets in the face of rapidly growing funds. During the decade of the 1930's, normal expansion of business was retarded by the general low level of confidence that prevailed. There may have been some overexpansion of plants in the preceding period too, but there is reason to believe that the uncertainty of the times and the fear of the future were the chief factors which limited new construction. In this same period the assets of insurance companies were increasing rapidly. This growth undoubtedly was stimulated by public appreciation of the remarkable record of financial soundness shown by the life companies following the 1929 crash.

The accumulation of funds was aggravated by the deficit financing by the federal government, and the decline in interest rates which resulted. As interest rates went down, it became possible for industries of various kinds, particularly the public utility companies, to refinance their existing securities, thus aggravating the problem of investing accruing funds by the additional problem of replacing issues which were redeemed. In some years we have had to invest as much as three or four times the amount of recurring income or, if you prefer, the growth of our assets.

The problem was temporarily alleviated by the 1938 depression when large amounts of railroad and lower-grade utility bonds became available at discounts, but, as the war approached, the problem returned.

In the period immediately before and during the war most of the new money requirements of industries were met by the banking system under government guarantees or by the government itself, either through contract prepayments, or lease of government-built plants. Interest rates continued to be under pressure during the war, owing to deficit war financing through the banking system and also to the maintenance by the government of a fixed pattern of rates which permitted the banking system gradually to extend the term of its loans and investments. Although government bonds were available in large amounts periodically, it was not long before the Treasury limited the subscriptions of insurance companies by a formula which did not recognize the continuing redemptions of corporate securities. It did not, therefore, permit the insurance companies to invest their funds in government securities at the time of their offering in sufficient amounts to offset the cash from these redemptions. As a result, many of the insurance companies experienced an accumulation of cash and Treasury certificates.

ALTERNATIVES IN THE FACE OF INVESTMENT SCARCITY

At this joint it might be well to examine the alternatives faced by insurance companies because of the absence of investment outlets. We have been in a period of declining interest rates for a long time. The net return of insurance companies on their ledger assets has gone down from over 5 per cent to less than 3 per cent in many cases. Is it wise for them to invest the funds in whatever long-term bonds are available and at the then level of interest rates, or should they try to delve into the future and anticipate a change in interest rates, and meanwhile protect themselves against loss of principal by investing their funds temporarily in low-yield, relatively short-term securities? That problem has cost most investment officers many a night's sleep.

In January, 1947, New York State Electric & Gas Corporation sold an issue of 30-year $2\frac{3}{4}$ per cent bonds which were reoffered at $102\frac{7}{8}$ to

yield 2.61 per cent to maturity. A glance at a yield book will show that in 1952, if interest rates change to a 4 per cent basis for A bonds, for example, that bond would be selling at about 80, giving an unrealized loss to the purchaser of about 23 points. During the same period the purchaser will have received in interest only $13\frac{3}{4}$ points, so that if interest rates do change to that extent, he will be 9 points worse off than if he had retained his money uninvested for that period.

The alternative to making that investment now is either to retain the cash uninvested or to invest in securities short enough so that the loss of principal will be minimized. In 1947 five-year optional governments yielded about 1.45 per cent. Therefore, an investor who took a short-term security instead of a long-term security would penalize his rate of return by about 1.16 basis points per annum for the period of holding of the short-term security, and his operation would be successful only if, at the end of the period, he could invest in a long-term security at a price at least sufficiently lower than the 2.61 per cent basis to equal the amount he penalized himself in income.

It is perhaps much easier, and certainly much less risky to one's reputation, to follow the herd and make no attempt to exercise any judgment as to the future course of interest rates. It is important, however, to realize that if interest rates do change substantially within the next five years, persons who have bought long-term bonds at these rates will be frozen into those investments and, to the extent of the funds invested in long-term bonds, will be unable to take advantage of the increased yield then available. They will ultimately recover their principal at maturity if the bonds are high grade, but, nevertheless, they will have lost the additional earnings which could have been obtained if a short-term investment policy had been followed.

PRINCIPLES UNDERLYING INSTITUTIONAL INVESTMENT POLICIES

It will perhaps be interesting to discuss some of the principles which are important for successful institutional investment policies and which may be regarded as fundamentals. We shall use the public utility field for a few illustrations.

Probably the most fundamental single fact which should be constantly in one's mind in considering public utility investments is that the industry is a regulated one. In exchange for being given a monopoly to serve in a certain territory, a public utility company is subjected to regulation by a public body under the laws of some political subdivisions. It is entitled to earn a reasonable return on its property value. The measure of value of its property changes from time to time because of political

considerations. The amount which constitutes a reasonable return also changes from time to time because of political and economic considerations. The regulatory commissions are by their nature political and, perhaps, all will agree that the courts, which constitute the only means of relief from commission decisions, have themselves become more political in their outlook. It is, therefore, necessary to keep abreast of commission and court decisions in order to make an intelligent estimate of the method of valuation of properties which may prevail in the near future.

Similarly, the course of interest rates and the trend of commission and judicial decisions may tend to forecast the rate of return which may be counted upon in the near future. For many years the concept of *fair value* was followed pretty generally by courts as well as commissions. This concept took account of many factors in arriving at the rate base, but the emphasis was on reproduction costs less observed depreciation. Gradually less and less emphasis was placed on reproduction cost and more on original cost. Observed depreciation gradually changed to straight-line depreciation. Both of the new elements tended to reduce the amount of the rate base.

During the same period we have been experiencing continually declining interest rates, and the money requirements of the utility companies have been obtained at lower and lower costs on their debts, preferred stocks, and equities. Economic conditions, also, have been such that the output of utilities has been increasing, and the removal of the excess profits tax has resulted in materially higher earning power. Because of the war and later the reconversion difficulties, utility commissions generally have not prosecuted utility companies to any great extent. It is highly probable, however, that with the return of more normal conditions one can expect to see the commissions demand rate reductions which will produce a much lower rate of return than the 6 per cent or 6½ per cent which we had begun to consider as a vested right.

Many companies are now earning from 7 per cent to 8 per cent or more, and if their rates of return are reduced to, say, 5 per cent, the decline in earnings on their common stocks will be serious. The fact must be recognized that, since the rate of return in most cases is allowed on the property (which approximates the capitalization), and since most companies have refinanced their bonds and preferred stocks at low rates, a moderate excess return on the entire capitalization usually means a substantial increase in the return on the common equity. On the other hand, a small percentage decrease in the return on the over-all property will result in a much greater percentage decrease in the common stock earnings.

If, for example, a company having 50 per cent of its capitalization in 3 per cent bonds, 25 per cent in preferred stock and 25 per cent in common stock, is earning 8 per cent on its entire capitalization (or property), it would be earning 22 per cent on its common stock. Then a reduction to a 5 per cent return on its entire capitalization will cause a reduction to 10 per cent on its common stock, or a reduction of almost 60 per cent in its common stock earnings. This is the well-known *leverage* principle. Therefore, the first thing to consider in attempting to value securities of a utility is "How much is it reasonably entitled to earn?"

Sometimes, particularly in regulated industries, labor costs get out of hand either because of inability to contract labor costs as fast as revenues are falling, or a combination of both. Recognition of this condition early enough will allow an investor to dispose of his securities before it is too late. A few interesting examples illustrating these conditions may be helpful.

Before the rapid transit companies were taken over by the City of New York they were operating under an inflexible fare set by contract. Their labor costs were rising over a long period of years, and little could be done to check the rise. Temporary relief was had by development of the pneumatic doors which eliminated the necessity of having a guard for each two cars to operate the doors manually. This relief was only temporary, and in short order operating expenses were again encroaching on the company's earnings. If this trend had been properly diagnosed when it first became apparent, an investor would have been able to sell his securities a long time before their prices collapsed.

Western Union is another case in point. Aside from the fact that its business was running into more and more competition from air mail, teletype, and long-distance telephone, its labor costs were so high that a relatively modest increase, in a period when labor costs generally were rising, would have converted into a deficit what superficially appeared to be a good margin of coverage for its bond interest. It would have been possible to sell Western Union funding and real estate bonds in 1936 between 103 and 112, but they were down in the 50's by 1937.

To some extent the railroad picture involved about the same conditions in the early part of 1946. Their difficulties were caused by the sharp decline in their traffic and by the delay in receiving rate relief, but it would have been possible a year before to arrive at the conclusion that they would lose several billion dollars of revenues when the average length of their haul and the amount of traffic originated returned to normal.

The moral to be derived from these examples is probably that statis-

tical information is of little use in investment work unless it is properly interpreted and unless one can deduce from the mass of available information the few fundamental facts which will influence the future.

RETURN ON INVESTMENTS

Normally the return on investments is supposed to be commensurate with the risk involved. Therefore, the most riskless types of investments; such as government bonds and high-grade corporate bonds, tend to follow the money market and are not much affected by the trends in the stock market. Lower-grade bonds historically have afforded a materially better yield than high-grade bonds, and this might average something like 1 per cent to 1½ per cent over a long period of time.

The lower-grade bonds and preferred stocks, however, tend to follow the major trends of the stock market. It will be found that in an extended bull market people forget that BAA bonds or lower are much less safe than high-grade bonds, and they will buy them at a very small differential in yield. However, it has been historically true that when the stock market enters a major downward movement the spread in yield between the high-grade bonds and the low-grade bonds widens. For instance, in 1932 or 1933 one could have bought the utility bonds in Moody's index of BAA bonds to yield more than twice as much as the bonds in its AAA index. Again, early in 1938 BAA utility bonds afforded 88 per cent more income than AAA bonds.

It follows that the matter of timing is of utmost importance if one is to invest in lower-grade bonds. At the present time, all of the grades of long-term bonds from governments through A bonds are squeezed into the very narrow yield differential of 0.30 basis points, as measured by long-term bank restricted treasuries and the recent New York State Electric & Gas 2¾s. If history means anything, this condition will not last forever.

Diversification of investments in life company portfolios is, of course, desirable both as to industries, companies within those industries, and maturity. In these days, with over 45 per cent of the life company portfolios invested in government obligations, the problem of liquidity probably does not exist. All of us would like to have more corporate securities and fewer governments, but that condition cannot be realized until corporate securities become available in greater volume. In the absence of sufficient corporate offerings to enable investors to pick and choose investment risks, institutions such as life insurance companies will probably have to retain a larger amount of governments than they otherwise would prefer to own.

REVIEW QUESTIONS

1. Why does the investment policy of a stock fire insurance company differ materially from that of a mutual life insurance company?
2. Approximately, what is the current annual growth in the assets of life insurance companies in the United States?
3. What limitations are imposed by New York state insurance laws on investments of life insurance companies with respect to:
 - (a) Real estate mortgages?
 - (b) Securities of the United States or its political subdivisions?
 - (c) Securities of Canadian governments and provinces?
 - (d) Canadian municipals and corporates?
 - (e) Obligations of foreign governments?
 - (f) Common stocks?
 - (g) Corporate bonds and preferred stocks?
4. Account for the growth of assets of life insurance companies.
5. Explain how the problem of portfolio management varies with the size of the insurance company.
6. Who is legally responsible for the proper investment of funds of insurance companies?
7. What has been the most pressing portfolio problem for insurance companies in recent years?
8. What are the principal advantages and disadvantages of following an investment policy of investing funds in whatever long-term bonds are available at the then level of interest rates rather than attempting to anticipate an increase in interest rates and investing temporarily in lower yielding short-term obligations?
9. Explain how the historical relationship between the yields of BAA bonds and AAA bonds is likely to influence the investment policy of an insurance company.

FUNCTIONS AND SERVICES OF A TRUST DEPARTMENT

by Thomas H. Beacon, *Vice President*
The First National Bank of Chicago

SINCE a trust department is part of an institution—whether bank or trust company—it seems proper to begin with comments on the general character of trust functions and services. Trust institutions in the United States have come into existence in response to a demand for a professional fiduciary. With the increase in complexity of our economic order, there has been created a need for specialization in the discharge of the many and varied functions of fiduciaries. Trust institutions have been called into existence to meet this need for specialization, primarily because, as institutions, they possess certain attributes essential for or advantageous to the rendering of trust service. Let us touch briefly on a few of these attributes.

ATTRIBUTES OF TRUST INSTITUTIONS

The first attribute is *continuous existence*. A trust established for individuals may continue in perpetuity. A trust indenture may cover bonds that will not mature until 50 or 75 years after the date of issue, throughout all of which period a trustee under the bond issue must be prepared to function continuously. It is manifest that only a corporation can undertake to act in these long-term roles that may well exceed the active business life of two generations.

Hand in hand with continuous existence is *continuous capacity*. Of course no trust institution can assure an individual that the trust officer acting as consultant the day his will is executed will be its trust officer the day it is probated. However, the customer can be confident that, upon the retirement of the man with whom he dealt, the institution will replace him with another thoroughly experienced and quite as competent.

Next we might discuss *financial responsibility*. Every person desires all possible assurance of the financial responsibility of his executor, trustee, or guardian of the property of his children. The trust institu-

tion, with its large capital and resources, is especially qualified to give this assurance.

An attribute not to be confused with financial responsibility is *responsiveness to obligations*. An individual fiduciary may be completely responsible and yet, for personal reasons, might be unwilling to act. A trust institution, on the other hand, is in business and realizes that it can continue in business and prosper only as it satisfies its customers and their beneficiaries. It accepts and discharges its obligations without delay or equivocation.

SPECIALIZATION

Perhaps the most important single factor which has resulted in the phenomenal growth of corporate fiduciaries since the turn of the century is the need for *specialization*. The volume of business of the trust institution and the number and variety of its accounts justify it in building up and maintaining a staff of specialists in their respective fields. The customer gains the advantage not only of the specialized knowledge and experience, but also of the organization and integration of the specialized advice. Whether a tax advantage outweighs an investment disadvantage, for example, is decided on the basis of correlation and integration of the advice of the respective specialists.

GROUP JUDGMENT

Undoubtedly one of the soundest principles underlying trust institutions is *group judgment*. Through the medium of trust committees of officers and directors, the decisions of the institution represent the composite judgment of many persons, based upon varied knowledge and experience drawn from many sources. Technical facts supplied by the specialists are complemented by the general information of the officers and directors.

SERVICES

In attempting to describe the services which a trust department performs, the first problem is one of classification. Perhaps the simplest and most natural division of the subject matter is into services and functions in respect of *individuals*, and services and functions in respect of *corporations*. However, it must be borne in mind that these categories are by no means mutually exclusive, as a number of services may appropriately be performed for both corporate and individual customers.

Bearing this qualification in mind, consider first the services and functions of a trust institution available to individuals.

EXECUTORSHIPS

The estate of every person who dies owning more than a nominal amount of property must be *probated*. An *executor* is the person or institution named in a will to undertake this responsibility. It derives its authority from the *will*, but the validity of its appointment must be recognized by the probate court. Thus the appointment in the will may be said to be in the nature of a nomination.

The first duty of the executor is to have the will admitted to probate. Upon satisfactory proof of execution, the court approves the will and issues letters testamentary authorizing the executor to perform the duties specified in the will and others incident to its office.

The executor then proceeds to take physical possession of all assets, collecting debts by legal action where necessary. It inventories all assets, sells those of a perishable nature, and liquidates the weaker assets to produce sufficient cash for claims, taxes and administration expenses. It arranges widow's and children's awards to provide them with funds during the period of probate, and employs counsel to defend any legal action against the estate, including will contests.

If the decedent was engaged in his own business, the corporate executor assumes the active management of the business until such time as it can be advantageously disposed of or placed under the control of the appropriate persons.

The executor in cooperation with legal counsel also examines all recent tax returns of the decedent to determine if refunds are available, prepares all federal and state tax returns, and conducts any litigation necessary to stay the collection of any improper taxes.

During the entire period of probate, periodic reviews of all the estate assets are made by the *investment committee* of the corporate executor and prompt sales made where such action is recommended.

Finally, the executor, having maintained a complete record of every transaction and obtained receipts for all disbursements, submits its final account to the probate court. It sees that proof of legal heirship is presented to the court and a decree of distribution is entered, vesting title of all assets as directed by the will.

A trust institution is not infrequently named a *co-executor* with an individual. When this occurs, the corporate executor takes possession of all assets, relieves the individual fiduciary of the burden of all ministerial functions, and confers upon him, as well, the benefits of investment advice and specialized experience. The authority and responsibility under these circumstances are shared equally.

TRUSTEESHIPS UNDER WILL

When one does not desire his estate to be distributed outright, but rather prefers to create a testamentary trust for the benefit of his family or others, he may by his will appoint a corporate fiduciary to retain and manage his estate. This creates a *testamentary trust*, or *trust under will*.

The decedent's purpose may be to relieve the beneficiaries of the burden and responsibility of caring for his estate, while enjoying the fruits of it. Or perhaps his motive is the elimination of multiple transfer costs, which looms as one of the major advantageous features of a testamentary trust. The purposes of testamentary trusts are many and varied. The flexible nature of this method of disposing of property makes it suitable for any legal purpose.

A trust institution may be named to act with an individual as a co-trustee, in which event it takes possession of the trust assets and consults its individual co-trustee regarding all proposed sales and investments, or the contemplated exercise of any discretionary power.

A corporate fiduciary is often named as a successor executor or trustee, to act in the event of the death, refusal or inability to act of the named individual executor or trustee.

ADMINISTRATION

When a person dies without leaving a will, or if he does leave a will but for any reason the executor named therein is unable or unwilling to act and a successor is not named in the will, an administrator is appointed by the probate court. Certain persons are given statutory preference in the selection and nomination of an administrator.

When a trust institution is nominated as an administrator, it carries out all of the functions heretofore described in respect of an executor. This, of course, includes frequent investment analysis. In cases where a decedent has died intestate, or without a will, the ultimate distribution of the estate is governed by the statutes of descent of the particular state involved, upon a decree of distribution entered by the probate court.

A corporate fiduciary may act as co-administrator with an individual. As heretofore noted, when a trust institution acts in such a joint capacity it takes possession of the estate assets and automatically performs all the administrative functions pertaining thereto. All discretionary powers are carried out only upon the approval of the individual co-administrator.

GUARDIANSHIPS AND CONSERVATORSHIPS

A trust institution frequently acts as the *guardian* of the estate of a minor, or the *conservator* of the estate of a person adjudged to be legally incompetent to manage his or her own affairs. Appointment to act in such a capacity is made by the probate court, upon an appropriate peti-

tion of a relative or other interested party. The institution serving in such a capacity acts only upon the approval and order of the court. It renders all the services and employs all the safeguards normally incident to an executorship or administratorship. In guardianships, when the ward attains legal majority the estate is turned over to such ward upon a final court approval of the fiduciary's accounts.

Institutions are not infrequently named in a joint capacity with an individual. This is particularly true when a guardian of the person, as distinguished from a guardian of the estate, is also desired. An individual guardian is named to act in the former capacity and a corporate guardian in the latter.

DEPOSITARY UNDER COURT ORDER

When an individual administrator, executor, or guardian wishes to reduce the cost of his surety bond and be relieved of the administrative duties of his office, he may request the court to appoint a trust institution as depositary under court order. The fee charged by the trust institution for such service is, incidentally, generally less than the cost of an individual surety bond.

When appointed to act in this capacity, a corporate fiduciary accepts custody of the securities, collects maturing income and principal, keeps detailed ledger records of all transactions, and makes all disbursements directed by the court. No investment advice is rendered under these circumstances. The services performed by the trust institution are the routine functions of a custodian, to be differentiated from the discretionary functions of a legal titleholder.

DEPOSITARY FOR ADMINISTRATOR OR EXECUTOR

An individual administrator or executor desiring advice and assistance in the performance of his office may appoint a trust institution to act as his depositary. The depositary performs all the routine duties on behalf of the individual fiduciary but subject to his approval. The latter has the full benefit of the advice of the corporate depositary, but of course retains his sole responsibility to the probate court.

TRUSTEESHIP UNDER A LIVING TRUST AGREEMENT

One of the most frequently employed services of a corporate fiduciary is as trustee under a living trust agreement. The purpose of the creator of a living trust may be one or several. It may be to relieve himself of the burden of management of all or a part of his estate, or to make provision for certain or all members of his family. His desire often is to create a fund for some specific charitable, educational, religious, or other

purpose. Not infrequently a donor's dominant motive is the reduction or the elimination of multiple transfer costs.

When an institution is named as trustee of a living trust, its duties and powers are of course largely defined by the agreement. It assumes all of the ordinary ministerial and management functions, such as collection of income and principal, furnishing the donor or beneficiaries with all pertinent information classified for income tax use, and submission of periodic statements. The trust assets are regularly reviewed, and sales and investments are recommended or ordered, as the case may be, by the investment committee of the institution. All distributions of income and principal are made to the beneficiaries designated by the donor, in the manner prescribed by the trust instrument. The creator of a living trust may retain the power to amend or revoke the trust, or he may declare the trust to be an irrevocable transfer. Also, the donor may retain any degree of investment control he desires. If sales and investments are to be made only upon his approval, the recommendations of the investment committee are presented to him for ratification before any action is taken.

INSURANCE TRUSTS

Trust institutions are widely named to act as trustee under an insurance trust agreement, which may be said to possess some characteristics of both a living trust and a testamentary trust. An insurance trust is created by depositing life insurance policies with the corporate trustee under an agreement governing their disposition. The trustee is designated as the beneficiary of the several policies to receive the proceeds of insurance on the death of the assured. During the lifetime of the assured, the trust is referred to as *inactive*, since the duties of the trustee during this period are generally very limited. Upon the death of the donor, the proceeds of the policies become the corpus of a trust to be managed and distributed in accordance with the terms of the agreement, and the trust is said to be *active*.

In many cases the assured is activated by the desire to make certain that his insurance proceeds will not be dissipated because of poor management or inexperience on the part of the dependents unused to handling and investing substantial sums.

AGENCY

One of the functions performed by a corporate fiduciary and available to individuals and corporations alike is *agency service*. Here the trust institution assumes custody of, but not title to, the deposited securities. Complete control of the securities is retained by the depositor, who may at any time withdraw any or all of them. Most trust institutions have three classes of agency service.

The most limited type of agency service is that of simple safekeeping. It may be performed by corporate fiduciaries on behalf of both individual and corporate depositors. It is primarily designed to furnish responsible custodianship, together with relief from the administrative tasks of collecting maturing income and principal items. Sales and investments are made as directed by the depositor. The corporate custodian supplies the customer with all pertinent information regarding bond calls, stock dividends and warrants, subscription rights, and the like. It remits income collections each month, either by check directly to the depositor or by deposit to his account in a designated bank.

In the more complete agency service the corporate agent keeps ledger entries of all transactions, makes monthly remittances of income collections, and furnishes the depositor with detailed monthly statements. It also supplies information classified for income tax purposes.

A third class of agency service is generally given the title of *agency with investment assistance*, *supervised agency*, or some similar designation. In addition to the complete agency service, the depositor is supplied with the investment advice of the institution's investment committee. An analysis of the securities is made at the time of deposit, with recommendations as to their sale or retention. At frequent intervals thereafter further reviews are made by the investment committee and all suggestions are immediately forwarded to the customer for his ratification or rejection.

PENSION AND PROFIT-SHARING TRUSTS

Many corporations of today are finding it advantageous to create a pension or profit-sharing trust for the benefit of their employees. A corporate fiduciary is frequently designated as trustee or depositary under such plans.

ESCROW AGENCY

Trust institutions are often made parties to escrow agreements in which their role might be described as that of a neutral stakeholder. They hold the property affected, determine when the terms of the agreement have been fulfilled, and dispose of the property in accordance with the terms of the agreement.

Now consider those functions of corporate fiduciaries which are especially designed to satisfy the particular needs and demands of corporations.

TRUSTEESHIP UNDER INDENTURE

When a corporation wishes to borrow money, it generally issues bonds, notes, debentures, or other securities. These are debts of the issuing

corporation and may be secured by a lien on certain corporation assets. The usual practice is for a corporation to execute a deed of trust conveying to a trust institution the legal title of the assets upon which the lien is to be imposed. The latter acts on behalf of the collective bondholders, and has power of foreclosure on the pledged property in the event of any default in interest or principal payments.

Trust deeds of this sort are given various names which spring from the priority of the lien and the nature of the pledged assets. For example, a *prior lien* trust deed, the bonds of which are often called *first mortgage* bonds, creates just what the name implies, a prior lien on the mortgaged assets. When the bond lien is *secondary*, the bonds are often called *general mortgage* bonds. A *collateral* trust deed denotes that the pledged assets consist of stocks and bonds owned by the corporation, rather than tangible property, and so on.

The corporate trustee under varying circumstances is called upon to discharge numerous other functions. For example, it may perform such duties as:

1. Exchanging permanent for temporary bonds.
2. Handling the registration and transfers of ownership of registered securities.
3. Fulfilling all insurance requirements set forth in the trust indenture, including the collection of money in settlement of insurance losses.
4. Executing releases of mortgaged property that may be sold by the issuing corporation, and receiving the proceeds of such sales.
5. Maintaining complete records of all transactions and rendering periodic statements to the debtor corporation, stock exchanges, and regulatory bodies.
6. Handling sinking fund redemptions in accordance with the provisions of the indenture.

TRANSFER AGENCY

Trust institutions are generally selected by corporations as their stock transfer agents. By appointing a transfer agent, the corporation relieves itself of the mass of detail involved in transferring its stock from one owner to another.

REGISTRAR

Any corporation having listed stock is required by most leading stock exchanges to have a registrar other than itself, to prevent the issuance of more shares than are authorized. Many corporations, not within the scope of the requirement because their stock is unlisted, nevertheless elect to follow the same practice for reasons of policy.

A professional fiduciary performs this service for corporations. It first obtains opinion of counsel that the issuance of any original or additional stock to be registered is properly authorized. As transfers are effected by the stock transfer agent, the registrar makes certain that the new shares issued equal those cancelled. Since the purpose in having a registrar is to provide an independent check on the shares issued by a corporation or its transfer agent, a trust institution cannot logically act as both registrar and transfer agent of a single issue.

DIVIDEND DISBURSING AGENT

A corporation wishing to be relieved of the great volume of work and correspondence involved in the payment of dividends on its capital stock may appoint a trust institution to act as its dividend disbursing agent. The duties of the latter are governed by a resolution of the corporation's board of directors. A professional fiduciary serving in such a capacity receives the cash allocated to dividends to be paid, computes the amount due each stockholder, and prepares and mails to each stockholder a check for the dividend due him.

OTHER CORPORATION SERVICES

In addition to the principal functions just described, trust institutions render a number of other services to corporate customers. A corporate fiduciary frequently acts as depositary for securities during the reorganization of a corporation, sometimes on behalf of, or upon the direction of, a committee of security holders. If a plan of reorganization requires an exchange of securities, the depositary may also act as exchange agent.

A trust institution may be designated as paying agent for maturing interest and principal payments on bonds of governmental agencies or private corporations. Likewise, it functions as the redemption agent for the stock or bonds of a corporate customer. If a corporation issues rights to subscribe to its capital stock, it may relieve itself of the numerous duties incident to the sale or exercise of the issued rights by nominating a professional fiduciary as its stock subscription agent.

When a corporation desires to issue registered bonds, as differentiated from bearer bonds, it may name a trust institution as its bond registrar to maintain a record of bondholders' names and addresses. As in the case of a dividend disbursing agent, a bond registrar withholds and pays to the federal government the proper tax on payments to nonresident alien bondholders.

MECHANICS OF TRUST INVESTMENTS

By way of conclusion, perhaps a further word about the mechanics of trust investments might be appropriate. As investment bankers, it is

important that we appreciate the problems of a trust department in the making of trust investments. Trust departments are and will continue to be our customers. As specialists in the marketing of securities, we are naturally interested in broadening our market.

First to be noted, as affecting sales, is the fact that the law places numerous restrictions around the investment actions of a fiduciary. These restrictions may be contained in the trust instrument or in various statutes controlling the investment action of trustees or in court decisions. The restrictions imposed by trust instruments are many and varied. Some make the trustee's investment problem very difficult by setting up artificial and unrealistic standards of investment. Other instruments give the trustee wide discretion in the selection of investments.

Illinois and at least five other states have enacted what is generally called the *prudent man rule* as a guide to trustees when the trust instrument does not restrict the action of the trustee. In other states, this rule has been adopted by court decision. Briefly, this rule permits a trustee to make such investments and only such investments as a prudent man would make, having primarily in view the preservation of the estate and the amount and regularity of the income to be derived. Obviously, highly speculative securities do not come within this rule.

Many other factors must also be considered in the making of trust investments. The Restatement of the Law of Trusts sets forth the following items, which are only a partial list:

1. The marketability of the particular investment.
2. The length of the term of the investment, for example, the maturity date, if any, the callability or redeemability, if any.
3. The probable duration of the trust.
4. The probable condition of the market with respect to the value of the particular investment at the termination of the trust, especially if at the termination of the trust the investment must be converted into money for the purpose of distribution.
5. The probable condition of the market with respect to reinvestment at the time when the particular investment matures.
6. The aggregate value of the trust estate and the nature of the other investments.
7. The requirements of the beneficiary or beneficiaries, particularly with respect to the amount of the income.
8. The other assets of the beneficiary or beneficiaries, including earning capacity.
9. The effect of the investment in increasing or diminishing liability for taxes.

The mechanics for giving consideration to all of these and other factors may vary slightly as between particular trust institutions, but the general pattern is as follows:

When a trust account is opened in a trust department, an initial analysis is made of each deposited security. This is accomplished by a large staff of research specialists who have the duty of accumulating and digesting available information relating to every corporation represented by securities held in trust and advisory accounts. This continuous flow of information, supplemented by statistical data received from numerous sources, is supplied to the *trust investment committee*. In addition, the committee is furnished with the factual information gained from the numerous business contacts of the institution in its other activities.

The committee formulates opinions based upon its consideration of all the facts known to it and submits its judgment to the customer in the form of *hold, sell, or buy* recommendations. Underlying the decisions of the committee are invariably to be found composite opinions and harmonized judgment concerning the management, the prospects, the importance, stability, and soundness of the enterprise in question.

The initial analysis of deposited securities is the beginning of a continuous and systematic process. If the security analysts conclude that certain securities should be sold because the financial soundness of the issuing corporation is threatened, or because a business trend has indicated that an entire industry is due to suffer a slack period, all accounts containing such securities receive the immediate attention of the responsible officers.

Quite obviously, as investment bankers, we are in a position to give great service to trust departments. We have specialized knowledge with respect to particular securities, a very broad concept of security markets, and practical experience with price movements and other important financial information. Our knowledge and experience will be helpful to a fiduciary in the making of investments. Investment bankers and trust departments are service institutions. By our joint efforts our service can be improved to our mutual advantage and ultimate benefit to the public.

REVIEW QUESTIONS

1. What are the characteristics of a trust department that make it a desirable fiduciary agent?
2. What services and functions are performed by a trust institution for an individual under:
 - (a) Executorships?
 - (b) Testamentary trusts?
 - (c) Administration of an estate?
 - (d) Guardianships and conservatorships?
 - (e) Depositary under court order?
 - (f) Depositary for administrator or executor?
 - (g) Trusteeship under a living trust agreement?
 - (h) Insurance trusts?

- (i) Agency service?
- (j) Escrow agency?
- (k) Pension and profit-sharing trusts?
- 3. What are the duties of an executor of an estate?
- 4. What is meant by having an estate probated?
- 5. Define:
 - (a) Testamentary trust.
 - (b) Executor.
 - (c) Administrator.
 - (d) Insurance trusts.
- 6. Under what conditions is an administrator appointed by the court for an estate?
- 7. What services and functions are performed by a trust institution for a corporation when acting as:
 - (a) Trustee under a mortgage indenture?
 - (b) Stock transfer agent?
 - (c) Registrar?
 - (d) Dividend disbursing agent?
- 8. What are the sources of restrictions on the investment actions of a fiduciary?
- 9. What are the principal factors that must be considered by a trust institution in making trust investments?

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